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CIS

RECLAMATION LEGISLATION

HEARING

BEFORE THE

SUBCOMMITTEE ON WATER AND POWER

OF THE

COMMITTEE ON ENERGY AND NATURAL RESOURCES
UNITED STATES SENATE

NINETY-SEVENTH CONGRESS

SECOND SESSION

ON

S. 698

A BILL TO AUTHORIZE THE SECRETARY OF THE INTERIOR TO ASSIST THE YUMA COUNTY WATER USERS' ASSOCIATION, ARIZONA, TO RELOCATE THE HEADQUARTERS OF SUCH ASSOCIATION

S. 933

A BILL TO AUTHORIZE REHABILITATION OF THE BELLE FOURCHE IRRIGATION PROJECT, AND FOR OTHER PURPOSES

S. 1409

A BILL TO AUTHORIZE THE SECRETARY OF THE INTERIOR TO CONSTRUCT, OPERATE, AND MAINTAIN MODIFICATIONS OF THE EXISTING BUFFALO BILL DAM AND RESERVOIR, SHOSHONE PROJECT, PICK-SLOAN MISSOURI BASIN PROGRAM, WYOMING, AND FOR OTHER PURPOSES

S. 1553

A BILL TO AUTHORIZE THE SECRETARY OF THE INTERIOR TO PROCEED WITH DEVELOPMENT OF THE WEB PIPELINE, TO PROVIDE FOR THE STUDY OF SOUTH DAKOTA WATER PROJECTS TO BE DEVELOPED IN LIEU OF THE OAHE AND POLLOCK-HERREID IRRIGATION PROJECTS, AND TO MAKE AVAILABLE MISSOURI BASIN PUMPING POWER TO PROJECTS AUTHORIZED BY THE FLOOD CONTROL ACT OF 1944 TO RECEIVE SUCH POWER

S. 1628

A BILL TO AMEND THE EMERGENCY FUND ACT (ACT OF JUNE 26, 1948, 62 STAT. 1052)

FEBRUARY 12, 1982

Publication No. 97-67

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CONTENTS

Page
S. 698 ... 3
S. 933 ... 5
S. 1409 ... 9
S. 1553 ... 16
S. 1628 ... 21

STATEMENTS

Abdnor, Hon. James, a U.S. Senator from the State of South Dakota ... 38, 40
Broadbent, Hon. Robert N., Commissioner, Bureau of Reclamation, Department of the Interior ... 74, 85, 88, 90, 98, 111
Christensen, Anders, WEB Water Development ... 234, 237
Daschle, Hon. Thomas A., a U.S. Representative from the State of South Dakota ... 240
DeConcini, Hon. Dennis, a U.S. Senator from the State of Arizona ... 35
Donaldson, Robert L., president, board of directors, Belle Fourche irrigation project, accompanied by Jim Casey, district counsel ... 221, 223
Goldwater, Hon. Barry, a U.S. Senator from the State of Arizona ... 23
Herschler, Hon. Ed, Governor of Wyoming ... 64
Hoyn, Curt, manager, Oahe Conservancy Subdistrict ... 242
Murkowski, Hon. Frank H., a U.S. Senator from the State of Alaska ... 1
Neufeld, Warren, secretary, South Dakota Department of Water and Natural Resources ... 118
O'Meara, J. W. "Pat," executive vice president, National Water Resources Association ... 245, 247
Osborn, Jones, Arizona State Senator, on behalf of the Yuma Park Crossing Council ... 212, 214
Pressler, Hon. Larry, a U.S. Senator from the State of South Dakota ... 56, 59
Roberts, Hon. Clint, a U.S. Representative from the State of South Dakota ... 47
Simpson, Hon. Alan K., a U.S. Senator from the State of Wyoming ... 31
Suciu, Larry W., attorney representing the Yuma County Water Users' Association ... 130, 134
Wallop, Hon. Malcolm, a U.S. Senator from the State of Wyoming ... 24, 27

APPENDIX

Additional material submitted for the record ... 251

RECLAMATION LEGISLATION

FRIDAY, FEBRUARY 12, 1982

U.S. SENATE,
SUBCOMMITTEE ON WATER AND POWER,
COMMITTEE ON ENERGY AND NATURAL RESOURCES,
Washington, D.C.

The subcommittee met, pursuant to notice, at 9:05 a.m., in room 3110, Dirksen Office Building, Hon. Frank H. Murkowski, presiding.

Present: Senators Murkowski and Wallop.

Also present: Russell R. Brown, professional staff member.

OPENING STATEMENT OF HON. FRANK H. MURKOWSKI, A U.S. SENATOR FROM THE STATE OF ALASKA

Senator MURKOWSKI. Good morning. The hearing before the Subcommittee on Water and Power of the Senate Committee on Energy and Natural Resources will now come to order.

The hearing this morning is to take testimony from administration and public witnesses on five bills before the subcommittee.

Briefly the bills are Senate bill 698 sponsored by Senators DeConcini and Goldwater, which would provide assistance for moving the headquarters of the Yuma Water Users' Association; Senate bill 933 sponsored by Senator Abdnor and Senator Pressler, would provide for rehabilitation of the Belle Fourche irrigation project in South Dakota. Senate bill 1409 sponsored by Senators Wallop and Simpson, would provide for the modification of Buffalo Bill Dam and promote the development of the Pole Cat Bench Area, Wyo.

Senate bill 1553, also sponsored by Senators Abdnor and Pressler, basically addresses the future of water resource development in South Dakota by reauthorizing the WEB rural water development project and authorizing studies of various water development, and Senate bill 1628 introduced by Chairman McClure at the request of the administration, would amend the Emergency Fund Act of 1948.

This is certainly a full agenda today. I am hopeful that we can give each witness ample opportunity to express their views. I know that some of you have come a long way at considerable expense to testify, certainly a strong testimonial to your interest. We will do our best to accommodate you.

The hearing record will remain open for 2 weeks to permit submission of additional material. The texts of the five measures as well as related executive communications will be introduced in the record.

I also have a communication that the subcommittee has received a statement from Senator Goldwater on S. 698 which will be included in the record at the appropriate location.

We have also been informed that the United Family Farmers of South Dakota intend to submit a statement regarding Senate bill 1543. Upon receipt, this will be included in the record.

[The texts of the bills and statement of Senator Goldwater follow:]

II

97TH CONGRESS
1ST SESSION

S. 698

To authorize the Secretary of the Interior to assist the Yuma County Water Users' Association, Arizona, to relocate the headquarters of such association.

IN THE SENATE OF THE UNITED STATES

MARCH 12 (legislative day, FEBRUARY 16), 1981

Mr. DECONCINI introduced the following bill; which was read twice and referred to the Committee on Energy and Natural Resources

---

A BILL

To authorize the Secretary of the Interior to assist the Yuma County Water Users' Association, Arizona, to relocate the headquarters of such association.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That (a) the Secretary of the Interior is authorized to take such action as may be necessary to make available to the Yuma County Water Users' Association, Arizona, suitable facilities for use by such association in carrying out its project functions, and to assist such association in relocating from its present facilities in the Yuma Quartermaster's Depot and associated historic sites.

(b) The Secretary of the Interior is authorized to make such facilities available to the Yuma County Water Users' Association on the basis of such terms and conditions and for such period as the Secretary shall prescribe.

SEC. 2. There is authorized to be appropriated such sum as may be necessary to carry out the provisions of this Act.

II

97TH CONGRESS
1ST SESSION

S. 933

To authorize rehabilitation of the Belle Fourche irrigation project, and for other purposes.

IN THE SENATE OF THE UNITED STATES

APRIL 8 (legislative day, FEBRUARY 16), 1981

Mr. ABDNOR (for himself and Mr. PRESSLER) introduced the following bill; which was read twice and referred to the Committee on Energy and Natural Resources

---

A BILL

To authorize rehabilitation of the Belle Fourche irrigation project, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the general plan for the Belle Fourche project, South Dakota, heretofore authorized for construction by the Secretary of the Interior, May 10, 1904, pursuant to the Reclamation Act of 1902 (32 Stat. 388), is modified to include construction, betterment of works, water conservation, recreation, and fish and wildlife conservation and development. As so modified, the general plan is reauthorized under the designation "Belle Fourche unit" of the Pick-Sloan Missouri Basin program.

SEC. 2. (a) The Secretary of the Interior (hereinafter referred to as the "Secretary"), is authorized to negotiate and execute an amendatory repayment contract with the Belle Fourche irrigation district covering all lands of the existing Belle Fourche project. This contract shall replace all existing contracts between the Belle Fourche irrigation district and the United States.

(b) The period or repayment of the construction and rehabilitation and betterment costs allocated to irrigation and assigned to be repaid by the irrigation water users shall be not more than forty years from and including the year in which such amendatory repayment contract is executed.

(c) During the period required to complete the rehabilitation and betterment program and other water conservation works, the rates of charge to land class in the unit shall continue to be as established in the November 29, 1949, repayment contract with the district, as subsequently amended and supplemented; thereafter, such rates of charge and assessable acreage shall be in accordance with the amortization capacity and classification of unit lands as then determined by the Secretary.

SEC. 3. (a) All miscellaneous net revenues of the Belle Fourche unit shall accrue to the United States and shall be applied against irrigation costs not assigned to be repaid by irrigation water users.

(b) Construction and rehabilitation and betterment costs of the Belle Fourche unit allocated to irrigation and not assigned to be repaid by the irrigation water users nor returned from miscellaneous net revenues of the Pick-Sloan Missouri Basin program within fifty years from and including the year in which the amendatory contract authorized by this Act is executed.

SEC. 4. (a) The provision of lands, facilities, and project modifications which furnish recreation and fish and wildlife benefits in connection with the Federal Water Project Recreation Act (79 Stat. 213), as amended.

(b) The interest rate used for purposes of computing interest during construction and interest on the unpaid balance of the capital cost allocated to interest-bearing features shall be determined by the Secretary of the Treasury as the beginning of the fiscal year in which construction of said interest-bearing features is initiated, on the basis of the computed average interest payable by the Treasury upon its outstanding marketable public obligations, which are neither due nor callable for redemption for fifteen years from date of issue.

SEC. 5. Appropriations heretofore or hereafter made for carrying on the functions of the Water and Power Resources Service shall be available for credits, expenses, charges, and costs provided by or incurred under this Act. The Secretary is authorized to make such rules and regulations as are necessary to carry out the provisions of this Act.

SEC. 6. The limitation of land held in beneficial ownership within the project by one owner, which are eligible to receive water from, through, or by means of project works shall be four hundred and sixty acres of class I land with an equivalency of 110 per centum for class II land, 125 per centum for class III land, and 140 per centum for class IV land. Acreage may be adjusted upward by the Secretary of the Interior if he determines such adjustments are warranted by changing economic conditions.

SEC. 7. There is hereby authorized to be appropriated for the rehabilitiation and betterment of the irrigation facilities of the Belle Fourche unit and recreation and fish and wildlife measures as authorized by this Act, the sum of $42,000,000 (based on January 1981 prices), plus or minus such amounts, if any, as may be justified by reason of ordinary fluctuations in construction cost indexes applicable to the types of construction involved herein.

II

97TH CONGRESS
1ST SESSION

S. 1409

To authorize the Secretary of the Interior to construct, operate, and maintain modifications of the existing Buffalo Bill Dam and Reservoir, Shoshone project, Pick-Sloan Missouri Basin program, Wyoming, and for other purposes.

IN THE SENATE OF THE UNITED STATES

JUNE 23 (legislative day, JUNE 1), 1981

Mr. WALLOP introduced the following bill; which was read twice and referred to the Committee on Energy and Natural Resources

---

A BILL

To authorize the Secretary of the Interior to construct, operate, and maintain modifications of the existing Buffalo Bill Dam and Reservoir, Shoshone project, Pick-Sloan Missouri Basin program, Wyoming, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the Secretary of the Interior, acting pursuant to the Federal reclamation laws (Acts of June 17, 1902, 32 Stat. 388 and Acts amendatory thereof and supplemental thereto), is hereby authorized to construct, operate, and maintain modifications to the Buffalo Bill Dam and Reservoir, Shoshone project, Pick-Sloan Missouri River Basin program, Wyoming, for the purposes of providing approximately seventy-four thousand acre-feet of additional water annually for irrigation, municipal and industrial use, increased hydroelectric power generation, outdoor recreation, fish and wildlife conservation and development, environmental quality, and other purposes. The principal modifications to the Buffalo Bill Dam and Reservoir shall include raising the height of the existing Buffalo Bill Dam by twenty-five feet, enlarging the capacity of the existing Buffalo Bill Reservoir by approximately two hundred and seventy-one thousand acre-feet, replacing the existing Shoshone Powerplant, enlarging a spillway, construction of a visitor's center, dikes and impoundments, and necessary facilities to effect the aforesaid purposes of the modifications. These modifications are hereby authorized as part of the Pick-Sloan Missouri River Basin program: *Provided,* That the powerplant authorized by this section shall be designed, constructed, and operated in such a manner as to not limit, restrict, or alter the release of water from any existing reservoir, impoundment, or canal adverse to the satisfaction of valid existing water rights or water delivery to the holder of any valid water service contract.

SEC. 2. The conservation and development of the fish and wildlife resources and the enhancement of recreation opportunities in connection with the modification of Buffalo Bill

Dam and Reservoir shall be in accordance with the Federal Water Project Recreation Act (79 Stat. 213), as amended.

SEC. 3. The modifications of the Buffalo Bill Dam and Reservoir shall be integrated physically and financially with the other Federal works constructed under the comprehensive plan approved by section 9 of the Flood Control Act of December 22, 1944 (58 Stat. 887, 891), as amended and supplemented. Revenues for the return of costs allocated to power shall be determined by power rate and repayment analysis of the Pick-Sloan Missouri River Basin program. Repayment contracts for the return of costs allocated to municipal and industrial water irrigation supplies shall be negotiated under provisions of the Reclamation Project Act of 1939 (53 Stat. 1198) or the Water Supply Act of 1958 (72 Stat. 320), as amended, and shall be prerequisite to the initiation of construction of facilities for this purpose. Costs allocated to environmental quality shall be nonreimbursable and nonreturnable under Federal reclamation law.

SEC. 4. (a) The Secretary of Energy is authorized to construct, operate, and maintain transmission interconnections as required physically to interconnect the hydroelectric powerplant authorized by this Act to existing power systems as he determines necessary to accomplish distribution and marketing of the power generated.

(b) Hydroelectric power generated by the facility constructed pursuant to this Act shall be delivered to the Secretary of Energy for distribution and marketing. Such facility shall be financially integrated with the Western Division, Pick-Sloan Missouri River Basin program power system and the power marketed under rate schedules in effect for such system.

SEC. 5. The interest rate used for computing interest during construction and interest on the unpaid balance of the reimbursable costs of the Buffalo Bill Dam and Reservoir modifications shall be determined by the Secretary of the Treasury, as of the beginning of the fiscal year in which construction of the unit is commenced, on the basis of the computed average interest rate payable by the Treasury upon its outstanding marketable public obligations which are neither due nor callable for fifteen years from date of issue.

SEC. 6. (a) There is hereby authorized to be appropriated for construction of the Buffalo Bill Dam and Reservoir modifications the sum of $83 million (January 1980 price levels) plus or minus amounts, if any, as may be required by reason of changes in construction involved and, in addition thereto, such sums as may be required for operation and maintenance of the works of said area.

(b) There is also authorized to be appropriated such sums as may be required by the Secretary of Energy to accomplish interconnection of the powerplant authorized by this Act, together with such sums as may be required for operation and maintenance of the works authorized by section 4(a).

SEC. 7. (a)(1) The Secretary of the Interior is authorized, in connection with the Polecat Bench Area, Shoshone Extentions Unit, Pick-Sloan Missouri Basin program, authorized by the Act of March 11, 1976 (90 Stat. 205), to acquire by donation, purchase, or exchange, lands and interests in lands within the Polecat Bench Area which he determines necessary for the construction, operation, and maintenance of the works of the Polecat Bench Area, or necessary to the establishment of economic farm units within the area.

(2) The Secretary of the Interior is authorized to acquire by donation, purchase, or exchange any tract of land or interests in land, outside of the Polecat Bench Area for a price not in excess of its fair market value. Upon acquiring land and interests, the Secretary is authorized to utilize the land or interests for purposes of entering into exchanges under paragraph (1) of this subsection.

(b)(1) In the case of lands and interests in land within the Polecat Bench Area under the jurisdiction of the Secretary of the Interior, including lands and interests acquired pursuant to paragraph (a)(1), and which the Secretary of the Interior is authorized to sell, in accordance with this Act, lands and interests in lands for an amount not less than fair market value as determined by the Secretary after appraisal.

(2) In disposing of lands and interests pursuant to paragraph (1) of this subsection, the Secretary, in order to supplement existing farms, shall give a preference to those individuals who were resident landowners within the Shoshone project on the date of the enactment of this section, and to the members of their immediate families, including but not limited to spouses, sons and daughters (natural or adoptive), and spouses of sons and daughters, lands and interests acquired by any person pursuant to this section together with lands already owned by them within the Polecat Bench Area, shall be subject to the excess lands provisions of the Federal reclamation laws, as amended and supplemented.

(c)(1) The Secretary of the Interior shall dispose of lands and interests in lands pursuant to this section by quitclaim deed, patent, or other appropriate instrument. The deed, patent, or instrument shall include, when deemed appropriate by the Secretary, a reservation of a lien for water charges. In addition, the Secretary is authorized, in disposing of lands and interests, to reserve to the United States any or all mineral rights in the same manner and to the same extent as provided in the case of patents under the Federal homestead laws.

(2) Deeds, patents, and instruments referred to in paragraph (1) of this section shall further contain rights-of-way for ditches, canals, tunnels, drains, public access, and other features of the works of the Polecat Bench Area as the Secretary of the Interior determines necessary.

(d) All moneys received by the Secretary of the Interior in connection with this disposition of lands and interests in lands under this section shall be deposited in the Federal Reclamation Fund to the credit of the Polecat Bench Area on which lands and interests so disposed of are located. Moneys so deposited shall be considered in the Polecat Bench Area economic analysis.

(e) The Secretary of the Interior is authorized to issue regulations as may be necessary to carry out the provisions of this section.

(f) There is authorized to be appropriated not to exceed $5.22 million for the purpose of carrying out the provisions of this section.

SEC. 8. The limitation of lands held in beneficial ownership within the Shoshone project, Pick-Sloan Missouri Basin program, Wyoming, by any one owner, which are eligible to receive water from, through, or by means of project works, shall be consistent with Federal reclamation laws (Act of June 17, 1902, 32 Stat. 388 and amendatory thereof and supplemental thereto).

II

97TH CONGRESS
1ST SESSION

S. 1553

To authorize the Secretary of the Interior to proceed with development of the WEB pipeline, to provide for the study of South Dakota water projects to be developed in lieu of the Oahe and Pollock-Herreid irrigation projects, and to make available Missouri basin pumping power to projects authorized by the Flood Control Act of 1944 to receive such power.

IN THE SENATE OF THE UNITED STATES

JULY 30 (legislative day, JULY 8), 1981

Mr. ABDNOR (for himself and Mr. PRESSLER) introduced the following bill; which was read twice and referred to the Committee on Energy and Natural Resources

---

A BILL

To authorize the Secretary of the Interior to proceed with development of the WEB pipeline, to provide for the study of South Dakota water projects to be developed in lieu of the Oahe and Pollock-Herreid irrigation projects, and to make available Missouri basin pumping power to projects authorized by the Flood Control Act of 1944 to receive such power.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That (a) the WEB rural water development project, authorized by section 9 of Public Law 96-355, is reauthorized.

(b) The Secretary of the Interior (hereinafter referred to as the "Secretary") is directed to proceed with the development of the WEB rural water development project, consistent with the terms of section 9(e) of Public Law 96-355, and to make available for immediate obligation any funds appropriated for such project for fiscal year 1981, except that such funds shall be made available directly to the WEB Association and shall not be transferred to the Department of Agriculture.

SEC. 2. (a) The Secretary is authorized, in cooperation with the State of South Dakota, to conduct a study pursuant to this Act which shall include consideration of—

(1) alternate uses of facilities constructed for use in conjunction with the Oahe unit, initial stage, James division, Pick-Sloan Missouri River basin program, South Dakota;

(2) future uses in South Dakota of water delivered by the Garrison unit, Pick-Sloan Missouri River basin program, North Dakota;

(3) a modified plan of development for the Pollock-Herreid unit, South Dakota pumping division, Pick-Sloan Missouri River basin program, South

Dakota, including alternative lands or reduced acreages; and

(4) the potential for development of any other water project or projects proposed by the Governor of the State of South Dakota, in accordance with the policies and priorities of the State, which the Secretary determines may qualify for Federal construction funding under the terms of this section.

(b) In formulating his recommendations to Congress the Secretary shall take into account the land inundated in South Dakota under the Pick-Sloan Missouri basin program and the irrigation development authorized for South Dakota by the Flood Control Act of 1944. In determining the feasibility of projects proposed by the State under this section the Secretary shall use criteria no less favorable than those under which the Oahe unit, initial stage, was authorized, except that the Secretary may use other criteria with the consent of the State.

(c) The Secretary shall report to Congress the findings of the studies, along with his recommendations for disposition of the Oahe unit, initial stage, for development of the Pollock-Herreid unit, and for Federal involvement in other projects proposed by the State.

(d) The Secretary may contract with the State to carry out the studies authorized by this section.

(e) The studies performed and the reports made under this section shall be of reconnaisance, appraisal, or feasibility grade as is appropriate to determine whether further action on the development of the Secretary's recommendations is warranted.

SEC. 3. (a) The Secretary is authorized to cancel the master contract and participating and security contracts for the Oahe unit, initial stage, and to release any and all funds accumulated by the Oahe conservancy subdistrict under the master contract.

(b) Those features of the authorized plan of development for the Oahe unit, initial stage, which were designed for and could be used only to deliver irrigation water to the Spink and West Brown irrigation districts shall not be constructed by the Secretary, but nothing in this Act shall be deemed to limit the authority of the Secretary to recommend development of other features, based upon the study authorized by section 2(a)(1) of this Act.

SEC. 4. The Secretary of the Interior, in cooperation with the Department of Energy, is authorized to make available the Missouri River basin program pumping power to irrigation projects constructed in South Dakota by Indian tribes or by public entities organized under State law and which have been authorized by the Flood Control Act of 1944 to receive such power. Such power shall be made available at the request of the *State of South Dakota or an Indian tribe,* regardless of the source of construction funding for such irrigation projects.

SEC. 5. There are authorized to be appropriated $ to carry out the provisions of this Act.

97TH CONGRESS
1ST SESSION

S. 1628

To amend the Emergency Fund Act (Act of June 26, 1948, 62 Stat. 1052).

IN THE SENATE OF THE UNITED STATES

SEPTEMBER 16 (legislative day, SEPTEMBER 9), 1981

Mr. MCCLURE (by request) introduced the following bill; which was read twice and referred to the Committee on Energy and Natural Resources

---

A BILL

To amend the Emergency Fund Act (Act of June 26, 1948, 62 Stat. 1052).

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the Act entitled "An Act to authorize an emergency fund for the Bureau of Reclamation to assure the continuous operation of its irrigation and power systems", approved June 26, 1948, is amended as follows: (1) by changing the first sentence of the Act to read as follows: "In order to assure continuous operation of all projects and project facilities governed by the Federal reclamation Acts (Act of June 17, 1902, 32 Stat. 388), and Acts amendatory thereof or supplementary thereto, and for which title is held by the United States, there is hereby authorized to be appropriated from the reclamation fund and emergency fund which shall be available for defraying expenses which the Commissioner of Reclamation determines are required to be incurred because of unusual or emergency conditions.".

STATEMENT BY SENATOR BARRY GOLDWATER

FEBRUARY 12, 1982

S. 698, RELOCATION OF YUMA COUNTY WATER USERS' ASSOCIATION

Mr. Chairman, I am very pleased that your Subcommittee on Water and Power is holding a hearing on S. 698, a bill which I support, that will assist the Yuma County Water Users' Association in Arizona to relocate its headquarters. Presently, the Association occupies the Old Quartermaster Depot which is a national historic landmark.

Built around 1859, this Depot served as storage and supply facility for military posts in Arizona, New Mexico, Utah, and Texas until 1880. In 1906, the Bureau of Reclamation occupied the depot when it began its work on the lower Colorado River water diversion project. It later contracted with the Yuma Water Users'Association to construct irrigation works to divert the flows of Colorado River water from California to the Yuma Valley; and in 1951, the Bureau entered into a contractual agreement with the Water Users' Association whereby the Association would take over the operation and maintenance of the project.

The City of Yuma and the State Parks Board of the State of Arizona are working together to establish and develop a public park along the Colorado River through Yuma and the vicinity. An integral part of this Yuma Crossing Park is the restoration of the Old Quartermaster Depot. This, of course, cannot be done until the Water Users'

Association vacates the premises and is relocated to another suitable location. The purpose of our bill is to authorize the Secretary of the Interior to facilitate and provide monetarily for such a move.

The development of Yuma's regional recreational park with all its historic and cultural assets will come to a halt if we do not provide the Association with the opportunity to relocate elsewhere. This project has been many years in the making and there is tremendous local and state support for it. The Yuma County Water Users' Association has no objection to a move if the Bureau of Reclamation will provide the necessary monies, and if the Bureau does not impose any penalizing contractual provisions to its existing contract.

The bill is a good one and, Mr. Chairman, I hope you will be able to favorably consider it. Thank you very much.

Senator **Murkowski**. I would call on my colleague Senator Wallop for an opening statement at this time, and I note that we have some significant developments in your State that have some very prominent Indian names. Is that a fair statement?

STATEMENT OF HON. MALCOLM WALLOP, A U.S. SENATOR FROM THE STATE OF WYOMING

Senator **Wallop**. That is a fair statement. Thank you very much, Mr. Chairman. I would also like, with your permission, to include for the record a statement by Senator Simpson on Buffalo Bill Dam, S. 1409.

I really want to begin by thanking you and your really very capable staff person, Russ Brown, for the work done to hold this hearing.

Buffalo Bill Dam when it was first constructed represented an historic moment in the reclamation of the West. This bill, which provides for the enlargement of the dam and reservoir, is again an historic step forward in Western water development. Fiscal austerity which will come as no surprise to anybody here has virtually mandated that the Federal Government no longer bear the entire cost of water development. I think true to its reputation as an innovative leader in Western water law development, the State of Wyoming has agreed to shoulder part of this burden through a cost sharing proposal in order to assure the development of the State's precious water resources.

The bill which I have introduced and which my colleague Senator Simpson has cosponsored would raise the dam 25 feet and increase the firm yield by 74,000 acre-feet annually. I do believe that the raising of the Buffalo Bill Dam is an economic and environmentally sound water project. I rise to the attack of some of my Eastern colleagues who criticize water development as being pork barrel and an example of unnecessary Federal spending, and just this week I listened to one of my colleagues, Senator Metzenbaum from Ohio, question Secretary Watt over the need for Western water development. It was obvious from his comments that there is a great misunderstanding over how vital water resource development is not only to the general well-being of States like Wyoming, but to our Nation's very existence. America's great agricultural leadership in the world is in no small part due to the vision of the reclamation program.

The proposed raising of Buffalo Bill Dam will not only benefit agriculture, but also profit the entire area as well as maximize both the Federal and the State investment. This bill does not authorize the construction of a new project but rather it develops the full potential of an existing facility.

The primary objective of raising the dam will permit the storage of excess spring runoff. Active conservation storage would be increased by over 270,000 acre feet, providing a firm yield of 74,000 annual acre feet annually which will be used for irrigation, outdoor recreation, fish and wildlife conservation, and for municipal and industrial purposes.

Another element of the project is the rehabilitation of the existing hydroelectric generating plant located at the dam site. The existing 5 megawatt powerplant is obsolete, and the new plant will increase power production to 20 million kilowatt hours annually. Water has tremendous potential for generating electric power, and upgrading and refitting existing plants such as the Shoshone Power Plant rather than building new ones is a very sound approach considering our current budget-trimming atmosphere.

One of the benefits of this project which is impossible to measure precisely is that of the mitigating effects of future drought. Unseasonably dry winters like those of 1977 and 1980 make it clear how disastrous a drought can be. The hardships and threats to existence resulting from the lack of water can be minimized, however, through the efficient use of water resources such as will be provided within this proposal.

The bill also includes provisions concerning a related reclamation project in the Shoshone River Basin, the Polecat Bench irrigation project which was authorized by Congress in 1976. Pursuant to this act, the Secretary of Interior was authorized to construct, operate, and maintain irrigation supply for 19,200 acres of land, and to provide a supplemental source of water for the town of Powell. The act did not, however, authorize the Secretary to acquire private lands which are necessary for the success of that project.

Since the passage of this legislation, many downstream water users have expressed concern over whether there is sufficient water in the Buffalo Bill Dam Reservoir without enlargement to meet the needs of the existing water users in the Polecat Bench Area.

To keep from getting the cart before the horse, the Wyoming delegation decided not to seek the necessary appropriations to construct Polecat Bench until Buffalo Bill Dam could be raised. It has been the stated position of the State of Wyoming that Polecat Bench, the enlargement of Buffalo Bill Dam, and the rehabilitation of the powerplant, should be considered as a package. The development of this comprehensive plan has already taken a number of years to get this far in the process.

In introducing an identical bill to the one currently before the committee in the 96th Congress, I attempted to eliminate a few years of delay by including within the proposal the authority needed by the Secretary to acquire the private lands within the Polecat Bench project. This seemed to be extremely timely since the owners of the private lands were showing a willingness to participate in the negotiations. Since that time, I have received a number of requests to delete these provisions from the proposed bill, and I would like to have those letters, if I may, submitted as part of the record.

Senator **Murkowski**. So noted in the record.[1]

Senator **Wallop**. I am also anxious to hear from the State as to their desire to have Polecat Bench and the Buffalo Bill projects considered simultaneously.

It is my understanding that the Wyoming State Legislature is currently considering a bill which would allow the State and the Bureau of Reclamation to enter into negotiations on a cost sharing formula for the construction of Buffalo Bill Dam. The State is to be commended for setting a precedent which will lead to a new period in water development, but as a caveat, however, I remind the Department of Interior and the State of their responsibility to the many interested parties to the development of this water resource, and I hope they will carefully consider those interests during their negotiations and their eventual operation of an enlarged Buffalo Bill Dam and Reservoir. I have no doubt but what they will.

I look forward to working with the members of this committee, and you particularly, Mr. Chairman, in getting this legislation passed. This project has been on the drawing board for several years and was totally ignored by the previous administration.

It is a pleasure to be working again with a bureau which is interested in fulfilling its responsibilities for water development. I hope this project will be only a beginning of a new stage of water development for the West.

I thank you, sir.

[The prepared statements of Senator Wallop and Senator Simpson follow:]

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[1] See appendix.

STATEMENT OF SENATOR MALCOLM WALLOP
BEFORE THE SUBCOMMITTEE ON WATER RESOURCES
COMMITTEE ON ENERGY AND NATURAL RESOURCES
S. 1409
February 12, 1982

I'D LIKE TO BEGIN BY THANKING YOU, MR. CHAIRMAN, AND YOUR EXCELLENT STAFF PERSON, RUSSELL BROWN, FOR THE WORK DONE TO HOLD THIS HEARING.

BUFFALO BILL DAM WHEN FIRST CONSTRUCTED REPRESENTED A HISTORIC MOMENT IN THE RECLAMATION OF THE WEST. THIS BILL, WHICH PROVIDES FOR THE ENLARGEMENT OF THE DAM AND RESERVOIR, IS AGAIN A HISTORIC STEP FORWARD IN WESTERN WATER DEVELOPMENT. FISCAL AUSTERITY HAS VIRTUALLY MANDATED THAT THE FEDERAL GOVERNMENT NO LONGER BEAR THE TOTAL COST OF WATER DEVELOPMENT. TRUE TO ITS REPUTATION AS AN INNOVATIVE LEADER IN THE WESTERN WATER LAW, THE STATE OF WYOMING HAS AGREED TO SHOULDER PART OF THIS BURDEN THROUGH A COST SHARING PROPOSAL IN ORDER TO INSURE THE DEVELOPMENT OF THE STATE'S PRECIOUS WATER RESOURCES.

THE BILL WHICH I HAVE INTRODUCED AND WHICH MY COLLEAGUE SENATOR ALAN SIMPSON HAS COSPONSORED WOULD RAISE THE DAM TWENTY-FIVE FEET AND INCREASE THE FIRM YIELD BY 74,000 ACRE FEET ANNUALLY. I DO BELIEVE THAT THE RAISING OF THE BUFFALO BILL DAM IS AN ECONOMIC AND ENVIRONMENTALLY SOUND WATER PROJECT. I RISE TO ATTACKS OF MY EASTERN COLLEAGUES WHO CRITICIZE WATER DEVELOPMENT AS BEING PORK-BARREL AND AN EXAMPLE OF UNNECESSARY SPENDING. JUST THIS WEEK, I LISTENED TO ONE OF MY COLLEAGUES FROM OHIO QUESTION SECRETARY WATT OVER THE NEED FOR WESTERN WATER DEVELOPMENT. IT IS OBVIOUS FROM HIS COMMENTS THAT THERE IS A GREAT MISUNDERSTANDING OVER HOW VITAL WATER RESOURCE DEVELOPMENT IS, NOT ONLY TO THE GENERAL WELL-BEING OF STATES LIKE WYOMING BUT TO OUR NATIONS VERY EXISTENCE. AMERICA'S GREAT AGRICULTURAL LEADERSHIP IS IN NO SMALL PART DUE TO THE VISION OF THE RECLAMATION PROGRAM.

THE PROPOSED RAISING OF BUFFALO BILL DAM WILL NOT ONLY BENEFIT AGRICULTURE, IT WILL ALSO PROFIT THE ENTIRE AREA AS WELL AS MAXIMIZE THE FEDERAL AND STATE INVESTMENT. THIS BILL DOES NOT AUTHORIZE THE CONSTRUCTION OF A NEW PROJECT, BUT RATHER IT DEVELOPS THE FULL POTENTIAL OF AN EXISTING FACILITY. THE PRIMARY OBJECTIVE OF RAISING THE DAM WILL PERMIT THE STORAGE OF EXCESSIVE SPRING RUN-OFF. ACTIVE CONSERVATION STORAGE WOULD BE INCREASED BY OVER 270,000 ACRE FEET, PROVIDING A FIRM YIELD OF 74,000 ACRE FEET ANNUALLY WHICH WILL BE USED FOR IRRIGATION, OUTDOOR RECREATION, FISH AND WILDLIFE CONSERVATION AND FOR MUNICIPAL AND INDUSTRIAL PURPOSES.

ANOTHER ELEMENT OF THE PROJECT IS THE REHABILITATION OF THE HYDROELECTRIC GENERATING PLANT LOCATED AT THE DAM SITE. THE EXISTING FIVE MEGAWATT POWER PLANT IS OBSOLETE. THE NEW MEGAWATT PLANT WILL INCREASE POWER PRODUCTION TO 20 MILLION KILOWATT HOURS ANNUALLY. WATER HAS TREMENDOUS POTENTIAL FOR GENERATING ELECTRIC POWER. UPGRADING AND RETROFITTING EXISTING PLANTS SUCH AS THE SHOSHONE POWER PLANT, RATHER THAN BUILDING NEW ONES, IS A VERY SOUND APPROACH CONSIDERING OUR CURRENT BUDGET TRIMMING ATMOSPHERE.

ONE OF THE BENEFITS OF THIS PROJECT WHICH IS IMPOSSIBLE TO MEASURE PRECISELY IS THAT OF MITIGATING THE EFFECTS OF FUTURE DROUGHTS. UNSEASONABLY DRY WINTERS, LIKE THOSE OF 1977 AND 1980 MAKE IT CLEAR HOW DISASTROUS A DROUGHT CAN BE. THE HARDSHIPS AND THREATS TO EXISTENCE RESULTING FROM THE LACK OF WATER CAN BE MINIMIZED, HOWEVER, THROUGH THE EFFICIENT USE OF OUR WATER RESOURCES SUCH AS WILL BE PROVIDED BY THIS PROPOSAL.

THE BILL ALSO INCLUDES PROVISIONS CONCERNING A RELATED RECLAMATION PROJECT IN THE SHOSHONE RIVER BASIN. THE POLECAT BENCH IRRIGATION PROJECT WAS AUTHORIZED BY CONGRESS IN 1976. PURSUANT TO THIS ACT, THE SECRETARY OF INTERIOR WAS AUTHORIZED TO CONSTRUCT, OPERATE, AND MAINTAIN AN IRRIGATION SUPPLY FOR 19,200 ACRES OF LAND AND TO PROVIDE A SUPPLEMENTAL SOURCE OF WATER FOR THE TOWN OF POWELL. THE ACT DID NOT, HOWEVER, AUTHORIZE THE SECRETARY TO ACQUIRE PRIVATE LANDS WHICH ARE NECESSARY FOR THE SUCCESS OF THE PROJECT.

SINCE THE PASSAGE OF THIS LEGISLATION, MANY DOWNSTREAM WATER USERS HAVE EXPRESSED CONCERN OVER WHETHER THERE IS SUFFICIENT WATER IN THE BUFFALO BILL DAM RESERVOIR WITHOUT THE ENLARGEMENT TO MEET THE NEEDS OF THE EXISTING WATER USERS AND THE PROPOSED POLECAT BENCH AREA. TO KEEP FROM GETTING THE CART BEFORE THE HORSE, THE WYOMING DELEGATION DECIDED NOT TO SEEK THE NECESSARY APPROPRIATIONS TO CONSTRUCT POLECAT BENCH UNTIL THE BUFFALO BILL DAM COULD BE RAISED.

IT HAS BEEN THE STATED POSITION OF THE STATE OF WYOMING THAT POLECAT BENCH, THE ENLARGEMENT OF BUFFALO BILL DAM AND THE REHABILITATION OF THE POWER PLANT SHOULD BE CONSIDERED AS A PACKAGE. THE DEVELOPMENT OF THIS COMPREHENSIVE WATER PLAN HAS ALREADY TAKEN A NUMBER OF YEARS TO GET THIS FAR IN THE PROCESS. IN INTRODUCING AN IDENTICAL BILL TO THE ONE CURRENTLY BEFORE THE COMMITTEE DURING THE 96TH CONGRESS, I ATTEMPTED TO ELIMINATE A FEW YEARS OF DELAY BY INCLUDING WITHIN THE PROPOSAL THE AUTHORITY NEEDED BY THE SECRETARY OF INTERIOR TO ACQUIRE THE PRIVATE LANDS WITHIN THE POLECAT BENCH PROJECT. THIS SEEMED TO BE EXTREMELY TIMELY SINCE THE OWNERS OF THE PRIVATE LANDS WERE SHOWING A WILLINGNESS TO PARTICIPATE IN NEGOTIATIONS.

I HAVE RECEIVED A NUMBER OF REQUESTS TO DELETE THESE PROVISIONS FROM THE PROPOSED BILL AND I WOULD LIKE TO HAVE THOSE LETTERS SUBMITTED AS PART OF THIS HEARING RECORD. I AM ALSO ANXIOUS TO HEAR FROM THE STATE AS TO THEIR DESIRE TO HAVE POLECAT BENCH AND THE BUFFALO BILL PROJECTS CONSTRUCTED SIMULTANEOUSLY.

IT IS MY UNDERSTANDING THAT THE WYOMING STATE LEGISLATURE IS CURRENTLY CONSIDERING A BILL WHICH WOULD ALLOW THE STATE AND THE BUREAU OF RECLAMATION TO ENTER INTO NEGOTIATIONS ON A COST-SHARING FORMULA FOR THE CONSTRUCTION OF BUFFALO BILL DAM. THE STATE IS TO BE COMMENDED FOR SETTING A PRECEDENT WHICH WILL LEAD TO A NEW PERIOD IN WATER DEVELOPMENT. AS A CAVEAT, HOWEVER, I REMIND THE DEPARTMENT OF INTERIOR AND THE STATE OF THEIR RESPONSIBILITY TO THE MANY INTERESTED PARTIES TO THE DEVELOPMENT OF THIS WATER RESOURCE. I HOPE THEY WILL CAREFULLY CONSIDER THOSE INTERESTS DURING THEIR NEGOTIATIONS AND THEIR EVENTUAL OPERATION OF AN ENLARGED BUFFALO BILL DAM AND RESERVOIR.

I LOOK FORWARD TO WORKING WITH MEMBERS OF THIS COMMITTEE AND THE ADMINISTRATION IN GETTING THIS LEGISLATION PASSED. THIS PROJECT HAS BEEN ON THE DRAWING BOARD FOR SEVERAL YEARS AND WAS TOTALLY IGNORED BY THE PREVIOUS ADMINISTRATION. IT IS A PLEASURE TO BE WORKING WITH A BUREAU WHICH IS AGAIN INTERESTED IN FULFILLING ITS RESPONSIBILITY FOR WATER DEVELOPMENT. I HOPE THIS PROJECT WILL ONLY BE A BEGINNING OF A NEW STAGE IN WATER DEVELOPMENT IN THE WEST.

STATEMENT OF SENATOR ALAN K. SIMPSON ON S. 1409 BEFORE SUBCOMMITTEE ON WATER AND POWER OF SENATE ENERGY AND NATURAL RESOURCES COMMITTEE

FEBRUARY 12, 1982

MR. CHAIRMAN, I WOULD LIKE TO THANK YOU FOR THIS OPPORTUNITY TO PARTICIPATE IN THIS HEARING. I AM VERY PLEASED TO NOTE THAT SENATOR WALLOP'S BILL, S. 1409, PROVIDING FOR THE INCREASED CAPACITY OF THE BUFFALO BILL DAM IN PARK COUNTY, WYOMING, IS ONE OF THE MEASURES BEING CONSIDERED HERE TODAY.

I CAN REPORT TODAY TO YOU AS ONE HAVING AN INTIMATE FAMILIARITY WITH THE BUFFALO BILL DAM. IT IS LOCATED JUST OUTSIDE OF MY HOME TOWN OF CODY, WYOMING. THIS HISTORIC STRUCTURE IS BOTH A LANDMARK AND AN INTEGRAL PART OF MY OWN COMMUNITY. WHEN THE DAM WAS CONSTRUCTED IN THE VERY EARLY YEARS OF THIS CENTURY -- BEFORE MY TIME, I CAN ASSURE YOU! -- MANY OF THE WORKERS WHO CAME TO CODY TO HELP BUILD THE DAM STAYED ON AND HAVE BECOME LIFETIME MEMBERS OF THE COMMUNITY. THE DAM AND RESERVOIR TOGETHER MAKE UP A POPULAR RECREATION FACILITY CONVENIENTLY LOCATED JUST A FEW MINUTES FROM TOWN. IN ADDITION, THE LOCATION OF THE DAM MAKES IT A SPECTACULAR EXAMPLE OF THE RECLAMATION PROCESS AT WORK, AND IT IS VIEWED BY

MANY HUNDREDS OF THOUSANDS ANNUALLY WHO PASS BY ON THEIR WAY TO THE EAST ENTRANCE TO YELLOWSTONE NATIONAL PARK.

IN ADDITION TO THESE AESTHETIC CONSIDERATIONS, THE BUFFALO BILL DAM OF COURSE SERVES ALL OF THE ECONOMIC AND UTILITARIAN FUNCTIONS USUALLY ASSOCIATED WITH RECLAMATION PROJECTS. THE DAM IMPOUNDS IRRIGATION WATER FOR THE ENTIRE SHOSHONE PROJECT WHICH CONSISTS OF FOUR IRRIGATION DIVISIONS ENCOMPASSING 96,000 ACRES. WATER IS PROVIDED UNDER CONTRACT TO DOWNSTREAM MUNICIPAL USERS. THE DAM ALSO IS A SOURCE OF HYDROELECTRIC POWER, AND I WOULD NOTE THAT S. 306, WHICH INCLUDES AUTHORIZATION FOR A LARGER POWER PLANT AT THE DAM, PASSED THE SENATE LAST YEAR AND IS NOW AWAITING ACTION IN THE HOUSE OF REPRESENTATIVES.

EVEN THOUGH BUFFALO BILL DAM, IN ITS PRESENT CONDITION, HAS SERVED AMERICA WELL FOR MANY YEARS, THERE IS NOW A DEFINITE NEED TO INCREASE THE CAPACITY FOR THE DAM. THE POSSIBILITY EXISTS THAT AN UNUSUALLY LARGE SPRING RUNOFF COULD "OVERTOP" THE DAM. INDEED, JUST THIS LAST SPRING, THE WATER LEVEL CAME DANGEROUSLY CLOSE TO THE TOP OF THE DAM. IN ADDITION, PROJECTIONS SHOW THAT THE PRESENT CAPACITY OF THE DAM WILL NOT BE SUFFICIENT TO SUPPLY

THE ANTICIPATED FUTURE NEEDS AND THE HISTORICAL PAST DIVERSIONS OF ALL THE USERS IN THE AREA.

FINALLY, MR. CHAIRMAN, I WOULD CALL TO YOUR ATTENTION A RECENT AND MOST WELCOME DEVELOPMENT WITH REGARD TO BUFFALO BILL DAM -- A DEVELOPMENT THAT I BELIEVE MAY MARK A TURNING POINT IN THIS NATION'S RECLAMATION POLICY. WATER USERS IN THE AREA SERVED BY BUFFALO BILL DAM, AS WELL AS OTHER INDIVIDUALS INTERESTED IN WATER DEVELOPMENT THROUGHOUT THE STATE OF WYOMING, HAVE NOT BEEN OBLIVIOUS TO NATIONAL TRENDS AND DEVELOPMENTS. IT HAS BECOME APPARENT TO ALL OF THOSE WHO ARE AWARE OF OUR PRESENT ECONOMIC SITUATION THAT THE NATIONAL "BELT-TIGHTENING" THAT WE HAVE BEEN GOING THROUGH WILL HAVE A SIGNIFICANT EFFECT ON THE HISTORIC FEDERAL ROLE IN FINANCING RECLAMATION PROJECTS. CLEARLY, STATE FINANCIAL PARTICIPATION CAN ASSIST IN STRETCHING LIMITED FEDERAL DOLLARS. IT IS WITH THIS THOUGHT IN MIND THAT THOSE INTERESTED IN FURTHER WATER DEVELOPMENT IN WYOMING -- WHICH IS EVERY SINGLE CITIZEN IN THAT WATER-SCARCE STATE -- HAVE BEGUN TO SEEK WAYS TO BRING ABOUT THIS NEW IDEA OF FEDERAL-STATE SHARING IN THE FINANCING OF WATER PROJECTS.

I CAN REPORT TO YOU THAT THE HONORABLE ED HERSCHLER, GOVERNOR OF WYOMING, IS IN AGREEMENT WITH THE CONGRESSIONAL DELEGATION THAT THIS IS AN IDEA WHICH SHOULD BE EXPLORED FURTHER. THE GOVERNOR HAS PROPOSED A COMPREHENSIVE $600 MILLION WATER DEVELOPMENT PLAN FOR THE STATE OF WYOMING -- INCLUDING $34 MILLION AS BEING EARMARKED FOR A STATE SHARE IN THE ENLARGEMENT OF BUFFALO BILL DAM. THE STATE LEGISLATURE IS CURRENTLY CONSIDERING THE GOVERNOR'S PROPOSALS, AND I AM AWARE THAT A BILL DEALING SPECIFICALLY WITH STATE PARTICIPATION IN THE FINANCING OF BUFFALO BILL DAM HAS BEEN INTRODUCED.

I UNDERSTAND THAT THE DEPARTMENT OF THE INTERIOR WITNESSES ARE READY TO RESPOND SPECIFICALLY TO THE QUESTIONS THAT HAVE BEEN RAISED BY GOVERNOR HERSCHLER AND OTHERS -- INCLUDING MYSELF -- ON HOW THIS TYPE OF FEDERAL/STATE COOPERATIVE EFFORT MIGHT BEST BE WORKED OUT IN THE CASE OF THE BUFFALO BILL DAM. I TRUST THAT THE TESTIMONY YOU WILL RECEIVE WILL LEAD THE WAY IN THIS REGARD AND PROVIDE A NEW ERA FOR THESE KIND OF PROJECTS AND LEAD ON TO A FURTHER DRAMATIC TELESCOPING OF THE TIME-PERIOD BETWEEN PLANNING, AUTHORIZATION AND CONSTRUCTION OF SUCH WATER PROJECTS AS A RESULT

OF THE JOINT EFFORTS OF THE STATES AND THE FEDERAL GOVERNMENT ON A GREATLY EXPANDED SCALE.

MR. CHAIRMAN, I BELIEVE THAT ALL OF THIS SINCERE ACTIVITY ON THE PART OF MANY PEOPLE AND LEGISLATORS IN WYOMING AMPLY DEMONSTRATES HOW MUCH THEY DESIRE -- AND REALLY NEED -- THIS PARTICULAR PROJECT. I WOULD TRUST THAT THE CONGRESS -- BEGINNING WITH THIS SUBCOMMITTEE -- WOULD SUPPORT S. 1409, AUTHORIZING THE ENLARGEMENT PROJECT, IN ORDER THAT THIS EXPLORATORY AND HISTORICAL VENTURE INTO FEDERAL-STATE COOPERATION COULD PROCEED, AND SERVE AS A MODEL FOR MANY MORE OF SUCH EFFORTS. I WOULD SINCERELY URGE YOUR FAVORABLE CONSIDERATION OF S. 1409.

I THANK YOU, MR. CHAIRMAN.

Senator MURKOWSKI. Thank you very much, Senator Wallop. We will call the first witness to the table, and we welcome Senator DeConcini from Arizona, and while the Senator is coming up, I might just ask my colleague Senator Wallop, we have tremendous fresh water potential in our State, but we don't have the colorful names. I can understand Buffalo Bill, but I was wondering if you could for my edification at least explain how did Polecat Bench get named that way?

Senator WALLOP. I am not exactly sure except that I assume you know what a polecat is.

Senator MURKOWSKI. I know what a polecat is. I didn't know it had a bench, though.

Senator WALLOP. Of course, you guys have the monumental mountains but no benches. We have both mountains and benches out there, and this one was apparently full of polecats.

Senator MURKOWSKI. Thank you. Good morning, Senator, we welcome you to the committee and will look forward to your testimony.

STATEMENT OF HON. DENNIS DeCONCINI, A U.S. SENATOR FROM THE STATE OF ARIZONA

Senator DECONCINI. Thank you very much. I want to express my appreciation to you and the other members of the subcommittee and the staff for holding the hearing on S. 698. I recognize the many matters before the subcommittee today. I will make my comments on the need for this legislation as brief as possible. We have other witnesses here—Larry Suciu of the Water Users from Yuma County. We also have State Senator Jones Osborn who represents that part of our State and will be available not only to submit testimony but brief remarks and to answer any questions that you might have.

Mr. Chairman, I introduced S. 698 along with my friend Senator Goldwater to clear up a longstanding problem that has been facing the city of Yuma in its plans to develop an historic district within the city limits.

The purpose of the bill is to authorize the Secretary of Interior to make available suitable facilities for the Yuma County Water Users' Association to carry out its project functions. City officials in conjunction with private citizens, the State of Arizona, and the Indian tribe, have put together a rather extensive plan for the restoration and rehabilitation of historic buildings along the Colorado River. They have been attempting to rekindle the spirit and character of the national historic landmark known as the Yuma Crossing and associated sites, which includes such attractions as the Yuma territorial prison, the U.S. Customs House, Fort Yuma, and the Yuma Quartermaster Depot. All of these buildings clearly reflect an historic flavor of the West and depict the meaningful role each played in making the Nation what it is today.

So far, a substantial amount of work has been done in the preservation process and contributions from many organizations and individuals have placed the city closer to realizing its goal.

The one major obstacle in the plan, and one that we have tried unsuccessfully to work out, is the present location of the Yuma County Water Users' Association. Its present location is in one of the historic buildings, the Yuma Quartermaster Depot. Before the restoration of this site can take place, we must move the association from its present quarters.

The Yuma Quartermaster Depot was originally utilized as a dispatch post and storage yard for the military in the mid-1800's. Toward the end of the century, the military abandoned the depot in 1906. The Bureau of Reclamation occupied the building, contracted with the Yuma County Water Users' Association for the purpose of diverting Colorado River water into the Yuma Valley. This is one of the oldest reclamation projects on the Colorado River and since its inception the association has continued to serve the project and occupy this building.

In 1951 the Bureau entered into another contract with the association. This document transferred the care, operation and maintenance of all property used for the operative purpose of the Yuma project to the association. This included the buildings and properties comprising the Yuma Quartermaster Depot. In 1962, the association's contract was repaid to the U.S. Government, and since that time, the group has continued to utilize the facilities at no cost.

Mr. Chairman, the Yuma County Water Users' Association will indefinitely continue to serve the valley's diversion of the Yuma project water for the Bureau. As members of the Yuma community, the association is sensitive to increased pressures from public officials and citizens to preserve the depot and allow its access to the public. They have indicated a willingness to relocate to more suitable quarters, but cannot and should not be expected to incur the cost of such a move since its contract has been repaid to the Bureau, and I feel that the Department of Interior has an effective responsibility to facilitate the relocation.

Last summer the Bureau's legislative report on identical legislation introduced in the House was very favorable, and as recently as this week, its update report included comments on this bill more encouraging than the earlier report. I have worked with the Bureau for some time on the project and have gotten clear indications from the region and the staff in the Washington office of its willingness to take responsibility for the relocation, and to support legislation to that effect.

Decades ago the Bureau of Reclamation may not have foreseen the interest that would be generated in the preservation of historic buildings. The Department of the Interior has the custodial responsibility for protecting our Nation's historic sites and our landmarks. This is a public building which belongs to the people. Mr. Chairman, when the city master plan is completed, it will be there for all the citizens of this country to enjoy. The Yuma Crossing and associated sites are outstanding representations of our Nation's heritage and significance, and illustrating and interpreting the culture and flavor of the Southwest.

I think it is important that we not let this slip away for future generations. Mr. Chairman, the good work that has been done by many individuals in completing this project is exemplary. It is my sincere hope that the subcommittee after listening to all the arguments presented can favorably report this legislation once and for all resolving the long-standing conflict.

I want to thank you, Mr. Chairman, for being here on the first day of our recess, and you, Senator Wallop, for taking the time to be here on this important matter and considering these things under the economic conditions that this country faces, and I join in Senator Wallop's complimentary remarks not only as to the investment part of reclamation, but also with the attitude toward the reclamation projects by the Bureau of Reclamation. Now indeed it is improvement, and I am pleased to say so.

Senator MURKOWSKI. Thank you very much for your excellent testimony, Senator DeConcini.

Senator Wallop, do you have any questions?

Senator WALLOP. I have no questions. I just believe, as you do, that it is time to get on with some of these things in the national interest, and I just do not subscribe to the issue that these are parochial. Interestingly enough, that figure continues to rise that we have spent more on the Metro subway system than in all the reclamation projects since 1902. Somehow or another the country's return off the reclamation that is in place seems vastly superior, and it is a convenience, and a fine one, the subway system, but in terms of the number of people served for the dollars invested, there is no comparison.

Senator DECONCINI. I couldn't agree more, Senator Wallop. Thank you very much, Mr. Chairman.

Senator **Murkowski**. Thank you very much, Senator DeConcini. That is a staggering comparison.

Senator **Wallop**. It really is.

Senator **Murkowski**. On the other hand, they say eventually everybody comes to Washington.

Senator **Wallop**. They don't all ride the subway, though.

Senator **Murkowski**. Okay. Our next witness is Senator Abdnor from South Dakota. Senator Abdnor, we welcome you to the hearing this morning. We are going to also fill up the other chair with Senator Pressler of South Dakota. We will be pleased to have you both here this morning and look forward to your testimony.

It really doesn't make any difference to us. The witness list suggests that Senator Abdnor is first and Senator Pressler is second. I assume, Russ, that has something to do with the alphabetical situation rather than the senior Senator, so go ahead.

Senator **Abdnor**. Thank you, Chairman Murkowski, and Senator Wallop. I really should bow to the senior Senator here to my left, but probably I am listed first because I browbeat you gentlemen for so long.

Senator **Murkowski**. That's probably true.

STATEMENT OF HON. JAMES ABDNOR, A U.S. SENATOR FROM THE STATE OF SOUTH DAKOTA

Senator **Abdnor**. I do want to echo what Senator DeConcini stated a few seconds ago. There are those of us in the Congress who truly appreciate the fact that you are willing to take the time after the recess has commenced, and I know going home is important to you, too, but we are grateful because we do have crowded schedules, calendars, coming up in the days ahead, so this is a real break for us, and we thank you.

I would like to say that I have a statement for Congressman Roberts who already left for home, and with your permission I would like to have it placed in the record. I, too, have a longer statement here that I would like to ask unanimous consent that it be made a part of the record. I would just like to summarize what I have to say, and also to mention that we have delegations from groups from South Dakota here on this bill who have come a long way but who feel so strongly about this matter and wanted to be here and asked to testify, so I just want to say again that I am pleased to be before you to reiterate my support, as you well know, for Senate S. 1553 and S. 933.

As you will recall, Mr. Chairman, these measures were the subject of hearings in Newell and Pierre, S. Dak., and believe me when I say that South Dakotans are still marveling at your stamina in sitting through that hot and lengthy session in Pierre. In case you don't realize it, Senator Wallop, we started early. I left before Senator Murkowski. I had to leave, and we intended to be there through 4, and I think Senator Murkowski was there well after 6, and South Dakota is still talking about it.

Senator **Murkowski**. You didn't tell me there was any place else I could go.

Senator **Abdnor**. We did have you in a situation, but he smiled and seemed to enjoy it, and I guess that is what was a surprise for many people.

S. 1553 is cosponsored by all four members of the South Dakota delegation. It has the Governor's support, and it has been endorsed with amendments by the administration. The amendments suggested by the administration are acceptable to the South Dakota delegation, and we urge prompt passage of the bill as endorsed by the administration, and we are pleased that progress is being made in passing H.R. 4347. That is the counterpart to S. 1553 in the House, but of course, nothing would please Senator Pressler and me more than if this committee should just happen to decide to really let this bill out and we could beat the House at it, so we appeal to you, and I hope you will give us serious consideration.

Let me say that your head staffer here, Mr. Brown, also has amazing stamina and went through this whole thing, and we hope he is the better for it after getting a good view of South Dakota.

Mr. Brown well knows, and the committee will tell you, I think they have told you, that after his personal examination of the facilities, the Belle Fourche project, that the rehabilitation work which would be authorized is badly, badly needed.

We recognize the current budgetary restraints, and it may not be possible to pass a straightforward program authorization like that provided in the late 1960's for the Riverton unit in Wyoming, the State of our colleague Senator Wallop, but we are willing to accept some kind of an amendment to S. 933 which would allow negotiations with energy or other industrial users to pay a portion or all of the cost of the repairs in return for water service from the project.

Now any negotiations concerning the allocation of water to an industrial user should only take place with the full consent and participation of the irrigation district and the State. With the support of the administration, we have renewed hope that the long ignored commitment to my State under the Pick-Sloan program will be upheld. Secretary Watt has acknowledged that South Dakota has not been fairly treated and that the Department has been working to rectify the situation to the greatest degree possible within current budgetary realities, and we certainly appreciate that.

Again, Mr. Chairman, I deeply appreciate your consideration, and Mr. Wallop. With the help of the administration, and particularly with the thoughtful consideration of this subcommittee, South Dakotans are hopeful that we can expect a measure of fairness which has been sadly lacking until now.

Thank you very, very much.

[The prepared statements of Senator Abdnor and Congressman Roberts follow:]

The Honorable James Abdnor
Before the Subcommittee on Water and Power
Friday, February 12, 1982

Chairman Murkowski and members of the subcommittee, I am pleased to be before you once again to reiterate my support for prompt action on S. 1553 and S. 933. Mr. Chairman, I especially appreciate your consideration in adding S. 1553 to the agenda for today's hearing. The notice was short, since it was not until last Monday that you and I were able to get together to discuss adding the bill to the agenda, but South Dakotans appreciate the prompt attention. Too often action in Washington is much too long in coming, and we deeply appreciate your consideration in seizing the opportunity of this hearing to advance action on S. 1553.

As I related to you on Monday, Mr. Chairman, S. 1553 is cosponsored by all four members of the South Dakota delegation. It has the Governor's support, and it has been endorsed with amendments by the Administration. The amendments suggested by the Administration are acceptable to the South Dakota delegation, and we urge prompt passage of the bill as endorsed by the Administration. Some of the reasons for our sense of urgency were discussed in the delegation's January 27th letter addressed to you and to Chairman Kazen in the House, and I would ask that our letter be made a part of the record.

From your visit to South Dakota for the September 12 hearing which you chaired in Pierre, Mr. Chairman, you will recall that there is great interest in the issues contained in S. 1553, including the WEB pipeline project, feasibility studies of CENDAK and the Garrison extension, and the provision of Missouri Basin hydropower for South Dakota projects, as envisioned in and authorized by the Flood Control Act of 1944. We are delighted to have the Administration's endorsement, and we are pleased that progress is being made in passing H.R. 4347, the counterpart to S. 1553, in the House. Both the House Agriculture Committee and the House Interior Committee have held hearings. The Agriculture Committee has scheduled markup for March 3rd and is expected to report the bill without difficulty. Nothing would please Senator Pressler and me more, Mr. Chairman, than to be able to beat our colleagues to the punch in passing S. 1553 more quickly than they pass H.R. 4347 in the House. With the Administration's support, we believe that it is a realistic goal.

In addition to the field hearing which you chaired in Pierre on the 12th of September, you will recall, Mr. Chairman that I chaired an official hearing of the subcommittee on the 11th in Newell, South Dakota, to develop a record on S. 933, to reauthorize the Belle Fourche Irrigation Project. I believe that record establishes the need for enactment of S. 933, and that Mr. Brown of the committee staff was convinced in his personal examination of project facilities of the need for the rehabilitation work which would be authorized.

We recognize, however, that in light of the current, severe budgetary constraints it may be impossible to pass and fund a straightforward Pick-Sloan Program reauthorization like that provided in the late 60's for the Riverton Unit in Wyoming, the state of our colleague, Senator Wallop, a member of the subcommittee. Consistent with present day realities, therefore, we are willing to accept an amendment to S. 933 which would allow negotiations with energy or other industrial users to pay a portion or all of the cost of the repairs in return for water service from the project.

Obviously, the irrigation district can use and would love to have all the water itself, but a large proportion of the available water supply is currently lost to seepage. Passage of S. 933 will provide for repairs which will reduce the loss to seepage, and in that sense the reauthorization should be considered a water conservation measure. It is possible, through water conservation, that the needs of both the irrigators and an industrial user can be accommodated and that the Belle Fourche Project will be better in every respect because of the reauthorization.

Of course, any negotiations concerning the allocation of water to an industrial user should only take place with the full consent and participation of the irrigation district and the State, and such negotiations must be premised on the grounds that the interests of the irrigators and the local community will be served.

Times have changed, Mr. Chairman, and we in South Dakota are prepared to change with the times. The legislative acts of Congress need to reflect the times as well. Enactment of S. 933 with an amendment along the lines I've suggested will serve both the new, modern day realities and the needs of the traditional water users, the irrigators of the Belle Fourche Irrigation District.

In closing, Mr. Chairman, let me just take a moment to reflect upon the history of the Pick-Sloan Missouri Basin Program as it relates to my state.

In the early 40's tremendous political pressure developed in the lower Missouri River Basin states to do something to alleviate the great floods which plagued them on an inevitable and regular basis. The river used to flood ten miles wide in Iowa, for example, and the suggested solution was to built flood storage reservoirs upstream; that is, permanently to flood portions of upstream states, like South Dakota, in order to protect downstream states from intermittent flooding. Four huge dams were built in South Dakota under the Flood Control Act of 1944, impounding the Missouri virtually for its entire stretch bisecting my state. Over 500,000 acres were taken out of the heart of my state, and South Dakotans did not appreciate it, to say the least. In fact, there was great opposition to the dams, and I myself was among the opponents.

For the good of our downstream neighbors, however, and based upon pledges of irrigation development, South Dakota's elected leaders at that time agreed to go along with the plan;

that is, the overall plan for development of the basin. That comprehensive plan of development, authorized in the Flood Control Act of 1944 as the Missouri River Basin Project, included over 600,000 acres of irrigation development for South Dakota. Not one, single acre of irrigation out of the reservoirs in my state has been developed by the federal government, however. The commitment has simply not been honored in a timely fashion.

With the support of the current administration we have renewed cause for hope. Secretary Watt has acknowledged that South Dakota has been given a very raw deal, and the Department has been working to rectify the situation to the greatest degree possible within current budgetary realities. The Administration's endorsement of S. 1553 is evidence of the renewed recognition of the commitment to my state, and it would be my sincere hope that S. 933 could be enacted as well, particularly if an amendment is adopted to provide a possible source of revenue from an industrial user.

Mr. Chairman, again, I deeply appreciate your consideration. South Dakotans recognize that the federal commitment to our state may never be fully honored; but with the help of the current administration, and particularly with the thoughtful consideration of this subcommittee, South Dakotans can expect a measure of fairness which has been sadly lacking until now.

Thank you very much.

JAMES ABDNOR
South Dakota

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VERNON E. LOEN
ADMINISTRATIVE ASSISTANT

United States Senate
WASHINGTON, D.C. 20510

COMMITTEES:
APPROPRIATIONS
ENVIRONMENT AND
PUBLIC WORKS
JOINT ECONOMIC

January 27, 1982

Honorable Frank Murkowski
Chairman
Subcommittee on Water and Power
Committee on Energy and
Natural Resources
A420-Immigration
Washington, D.C. 20510

Honorable Abraham Kazen
Chairman
Subcommittee on Water and Power
Committee on Interior and
Insular Affairs
1320 Longworth House Building
Washington, D.C. 20515

Dear Frank and Chick:

You have both heard more from us than you would like with respect to S. 1553/H.R. 4347. Enactment of this measure is vital, however, and we hope that you will excuse our persistence in urging once again, jointly, as a delegation, that it be moved with all due haste.

As you know, the Administration has officially endorsed enactment of the bill with amendments. While we sincerely believe that our state is entitled to more even than would be provided by S. 1553/H.R. 4347 as introduced, especially the retention of favorable authorization criteria, we recognize that the provisions supported by the Administration are realistically the best we can get at this time. Consequently, we respectfully urge enactment of those provisions without delay.

There are several reasons for our sense of urgency:

> First, the $1.9 million which was appropriated for the WEB project for FY81 has been deferred until the project is reauthorized. It would be well to initiate construction of the intake structure while the level of Lake Oahe is low, yet a delay in the reauthorization could mean missing the 1982 construction schedule altogether.
>
> Second, the urgency of the need for WEB has been recently re-emphasized by the failure of the water supply of the community of Roscoe, South Dakota. The community has been forced to haul water from neighboring towns, and the systems of other communities to be served by WEB could fail at any time as well.

Third, bids were so favorable on the Grass Rope irrigation project that the Department is considering accelerating completion of the project in FY82 to take advantage of the cost savings available. The lack of clear-cut authority for Missouri Basin power will complicate development of the project and could result in needless expense to the Lower Brule Tribe.

Fourth, the Department is ready to proceed to the feasibility level with studies of CENDAK and extension of the Garrison Unit. The State of South Dakota is cooperating closely with the Department in these studies. In fact, Governor Janklow has proposed and the Legislature is expected to approve State funding for portions of the studies, and a delay in the study authorizations with prevent the Department from cooperating fully with the State in a timely fashion. A delay in the Garrison study could have the added effect of forcing the State to reassess its position to ensure that the interests of citizens along the James River are protected, and CENDAK supporters have already committed a substantial amount of their own money to studying the potential alternative use of facilities constructed for use in conjunction with the Oahe Unit. Finally, it is costing the government to maintain those facilities, and there is no point in delaying consideration of whether they can be put to productive use.

These are some of the causes of our sense of urgency, Frank and Chick; and, as you can understand, each of them is generating a certain amount of local political pressure upon us to achieve action. That is especially so since the Administration has endorsed the bill and particularly in the case of the emergency at Roscoe. Our constituents do not understand the routine delays in the legislative process, to which every Member of Congress has become accustomed, and this is simply and respectfully to convey once again our unified urging that S. 1553/ H.R. 4347 be moved as quickly as possible.

Thank you very much for your kind consideration.

Sincerely,

Larry Pressler
LARRY PRESSLER
United States Senator

Sincerely,

Jim Abdnor
JAMES ABDNOR
United States Senator

Tom Daschle
THOMAS DASCHLE
Member of Congress

CLINT ROBERTS
Member of Congress

Statement of the Honorable Clint Roberts
Subcommittee on Water & Power,
Committee on Energy and Natural Resources
February 12, 1982

Mr. Chairman, I appreciate this opportunity to testify on both S. 1553/HR 4347 and S 933/HR 3164 concerning South Dakota water development. I will address each bill separately.

First, S 1553/HR 4347, is a bill sponsored by all four members of the South Dakota Congressional Delegation to provide for water development in our state. Agreements have been reached with the Administration to fully support this legislation. Additionally, the Governor, major South Dakota communities, and many water groups in South Dakota have endorsed the bill.

The 1944 Flood Control Act provided for a grand scheme of flood control and navigation in the Missouri River Basin--the Pick-Sloan Plan. It was based on six mainstem dams to store runoff waters, four of which are located in South Dakota.

For the 540,000 acres of prime bottomland flooded in South Dakota by the dams, the State and Indian Tribes within the State were to receive irrigation development. This development would be partially financed and made feasible by the low-cost power generated at the mainstem dams. The original costs of these dams have been paid back, yet South Dakota has received few of the promised benefits in return. Downstream states have greatly benefited from flood control and increased reliable navigation.

In 1968, the Oahe project was authorized according to the Pick-Sloan Plan to begin the compensation process. After $41 million worth of construction, the project was halted by the Carter Administration.

Since that time, the State of South Dakota has been exploring alternatives, some of which would use portions of the in-place Oahe project features. Creative funding and financing may involve the use of State and/or private construction money.

S 1553/HR 4347 is intended to assist with water development in the State. The badly needed WEB Rural Water System will be reauthorized under the Department of the Interior, studies to explore what development is possible in South Dakota will begin and the rights of South Dakota will be preserved concerning the inundation of bottomland and in regard to hydropower use. Additionally, many of the technical problems that plagued the Oahe Unit are addressed and solved.

Mr. Chairman, the delegation has announced to the people of South Dakota their unified stand behind this legislation as amended. We wish to move it forward to meet the urgent needs of South Dakota.

S 1553/HR 4347 has made significant gains towards passage in the House of Representatives. Hearings have been held in the Water and Power Resources Subcommittee of the Committee on the Interior and Insular Affairs. A mark-up session will be scheduled soon. The Subcommittee on Conservation, Credit and Rural Development of the House Agriculture Committee has held hearings and Full Committee mark-up is scheduled for March 3, 1982. I hope that this

Subcommittee and the Full Committee of the Senate can act upon the bill very soon.

Mr. Chairman, on April 8, 1981, I introduced HR 3164, the companion bill to S 933. This legislation enjoys the sponsorship of all four members of the South Dakota Congressional delegation, which serves to emphasize the importance the project has within the wide picture of South Dakota water development.

I have toured the facilities between Newell and Nisland, South Dakota, as well as the Orman Dam, to examine the condition of the existing project. It was clear to me from my inspections that the project requires a major rehabilitation.

The Secretary of the Interior authorized construction of the Belle Fourche Project on May 10, 1904, under the original Reclamation Act. Rehabilitation and betterment work was accomplished in 1950 and 1953.

Now, Mr. Chairman, the project is in need of major rehabilitation again. As I pointed out at the Field Hearings in Newell, South Dakota on September 11, 1981, between 40% and 50% of the transported water is lost to seepage and evaporation. S 933/HR 3164 would reauthorize the project under the Pick-Sloan Missouri River Basin Plan for study of the specific improvements. These improvements are needed to make the Belle Fourche irrigation system efficient to conserve the precious little water we have in Western South Dakota and promote a stable economy in the area.

When we look at water development, Mr. Chairman, I urge everyone to remember and preserve the existing facilities we have already constructed and used. The Belle Fourche project has served the people of South Dakota well in the past and can again with the passage of S 933/HR 3164. I hope the Subcommittee and the Full Committee will join in the spirit of water development and be able to move this legislation along to revitalize a project and an area of South Dakota.

Thank you.

S. 1553

97th CONGRESS
1st SESSION

To authorize the Secretary of the Interior to proceed with development of the WEB pipeline, to provide for the study of South Dakota water projects to be developed in lieu of the Oahe and Pollock-Herreid irrigation projects, and to make available Missouri basin pumping power to projects authorized by the Flood Control Act of 1944 to receive such power.

IN THE HOUSE OF REPRESENTATIVES

July 30, 1981

Mr. ROBERTS of South Dakota (for himself and Mr. DASCHLE) introduced the following bill; which was referred jointly to the Committees on Agriculture and Interior and Insular Affairs.

A BILL

To authorize the Secretary of the Interior to proceed with development of the WEB pipeline, to provide for the study of South Dakota water projects to be developed in lieu of the Oahe and Pollock-Herreid irrigation projects, and to make available Missouri basin pumping power to projects authorized by the Flood Control Act of 1944 to receive such power.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

That (a) the WEB rural water development project, authorized by section 9 of Public Law 96-355, is reauthorized subject to the following changes in such section:

(1) the proviso clauses contained in subsection (b) shall not apply to the WEB Rural Water Development Project;

(2) the first sentence of subsection (d) is stricken; and

(3) the first sentence of subsection (e) is stricken and the following sentence is inserted in lieu thereof: "The Secretary of Interior shall use funds appropriated under this Act to provide financial assistance to plan and develop the WEB Rural Water Development Project under the terms and conditions of the Consolidated Farm and Rural Development Act and the rules and regulations promulgated by the Department of Agriculture under that Act, except to the extent such Act or rules or regulations promulgated thereunder are inconsistent with the provisions of this section."

(b) The Secretary of the Interior (hereinafter referred to as the "Secretary") is directed to proceed with the development of the WEB Rural Water Development Project, consistent with the terms of section 9(e) of Public Law 96-355, as amended by section 1(a)(3) of this Act, and to make available for immediate obligation any funds appropriated for such project for fiscal year 1981.

Sec. 2 (a) The Secretary is authorized, in cooperation with the State of South Dakota, to conduct a study pursuant to this Act which shall include consideration of --

(1) alternate uses of facilities constructed for use in conjunction with the Oahe unit, initial stage, James division, Pick-Sloan Missouri River basin program, South Dakota;

(2) future uses in South Dakota of water delivered by the Garrison unit, Pick-Sloan Missouri River basin program, North Dakota; and

(3) a modified plan of development for the Pollock-Herreid unit, South Dakota pumping division, Pick-Sloan Missouri River basin program, South Dakota, including alternative lands or reduced acreages.

(b) In formulating his recommendations to Congress the Secretary shall take into account the land inundated in South Dakota under the Pick-Sloan Missouri basin program and the irrigation development authorized for South Dakota by the Flood Control Act of 1944.

(c) The Secretary shall report to Congress the findings of the studies, along with his recommendations for disposition of the Oahe unit, initial stage, for development of the Pollock-Herreid unit, and for Federal involvement in other projects proposed by the State.

(d) The Secretary may contract with the State to carry out the studies authorized by this section.

(e) The studies performed and the reports made under this section shall be of reconnaissance, appraisal, or feasibility grade as is appropriate to determine whether further action on the development of the Secretary's recommendations is warranted.

Sec. 3 (a) The Secretary is authorized to cancel the master contract and participating and security contracts for the Oahe Unit, Initial Stage: Provided, however, that such actions shall be done with the agreement of the Oahe Conservancy Subdistrict and the Spink and West Brown Irrigation Districts; and provided further, that any and all funds accumulated by the Oahe Conservancy Subdistrict under the Master Contract shall be refunded to or otherwise expended for the benefit of the taxpayers of the subdistrict; and that any repayment obligation existing at the time of cancellation of the Master and Security Contracts shall thereafter be treated as a deferred cost of the Pick-Sloan Missouri Basin Program to be assumed by the beneficiaries of any future project which utilizes the Oahe Unit facilities for which the repayment obligation was incurred.

(b) Those features of the authorized plan of development for the Oahe unit, initial stage, which were designed for and could be used only to deliver irrigation water to the Spink and West Brown irrigation districts namely: Faulkton, Cresbard, West Main, Redfield, James, and East Canals; Cresbard and Byron Dams and Reservoirs; James and Bryon Pumping Plants; and associated features; shall not be constructed by the Secretary, but nothing in this Act shall be deemed to limit the authority of the Secretary to recommend development of other features, based upon the study authorized by section 2 (a)(1) of this Act.

Sec. 4. The Secretary of the Interior, in cooperation with the Department of Energy, is authorized to make available the Missouri River Basin program pumping power to new irrigation projects constructed by Indian tribes or by public entities organized under State law which have been authorized by the Flood Control Act of 1944 to receive such power. Such power shall be made available to the Grass Rope Unit, Pick-Sloan Missouri Basin Program. In recognition of the legislative intent of the Pick-Sloan Missouri River Basin Program to provide project power to financially sound irrigation development, such power may also be made available at the Secretary's discretion for other such Federal or cooperative Federal/non-Federal irrigation projects, if requested by the Governor or an Indian tribe, provided that the Secretary determines the project to be economically and financially feasible and in compliance with applicable environmental laws, and submits such proposals to Congress subject to disapproval by joint resolution within 90 days.

Sec. 5. Effective October 1, 1981, there are authorized to be appropriated such funds as may be necessary to carry out the provisions of this Act.

Senator MURKOWSKI. Thank you for your testimony, Senator Abdnor. I do recall that Saturday morning. It was rather warm and not only was it warm inside the gynmasium as a result of just the heat, but later on in the afternoon when two sides started taking each other on it heated up a little bit more. It certainly proved that the political process was alive and well in your State, and I think the testimony by Senator Pressler and the testimony by your Governor and others was certainly worthwhile as far as the staff and the record.

Thank you, and I will call on Senator Pressler next. Senator Pressler, we look forward to your testimony, and we welcome you.

STATEMENT OF HON. LARRY PRESSLER, A U.S. SENATOR FROM THE STATE OF SOUTH DAKOTA

Senator PRESSLER. Thank you very much for holding this hearing, and I join in my colleague, Senator Abdnor's remarks in complimenting you, and I remember so well the hearings in South Dakota, and we appreciate it.

Also let me commend Senator Wallop for his work here, and also his statement this morning that we have spent more on the Metro construction than we have on all of the reclamation projects, and I think that is really a significant thing that is not emphasized enough.

Our State of South Dakota has made sacrifices. Indeed I remember when I was a Member of the House of Representatives one of the first actions that I was involved in was helping out with the lower Big Sioux project which prevented flooding in Iowa, and we were willing to give up some South Dakota land to help out our neighboring States, so South Dakota has felt that it is deserving of a project because we have, as the record shows, over the years given up several thousand acres of bottomland and other areas to help out with the flood control for the downstream States.

I also want to commend the people who are here from South Dakota, Anders Christensen from the WEB group, and Curt Hoyn from the Oahe Subdistrict, and Bob Donaldson from the Belle Fourche irrigation project, and others who have written and worked on these matters. I would like to thank you for including S. 1553 and S. 933 in your subcommittee hearings today, and for giving us the opportunity to testify in support of these bills.

These bills are of the utmost importance to the people of South Dakota. I will first direct my comments to S. 1553, a bill to reauthorize the WEB pipeline, authorize feasibility studies for CENDAK and the extension of the Garrison unit into South Dakota, and provide low-cost hydropower to the Grass Rope irrigation project.

As you may know, South Dakota gave up over 500,000 acres of prime farmland along the Missouri River to allow the Pick-Sloan Missouri Basin program to be built. The four dams and reservoirs on the Missouri River that were built under this program have provided downstream States with flood control and neighboring States with electric power. However, South Dakota has yet to be compensated for the sacrifice made for the program, and S. 1553 will provide South Dakota with at least partial compensation.

S. 1553 would accomplish a number of items to promote water development in South Dakota. The bill would reauthorize the WEB pipeline project and restore the funds that were appropriated for the WEB project in fiscal year 1981. It should be noted that the Senate authorized the WEB project in 1980, and funds were appropriated by the Senate for the project in 1981, but due to an agreement with the Carter administration, the project has not yet been started. The WEB pipeline will provide 51 towns and 3,000 farms with good quality water from the Missouri River which is desperately needed in South Dakota, and I might say coming from a family farm myself in South Dakota, that our water needs are getting very severe.

This need was recently emphasized when the small town of Roscoe, S. Dak., which will be served by WEB, had their wells go bad. As a result, during the month of January, 450,000 gallons of water were hauled from nearby communities and new wells were drilled at a cost of over $40,000. Unfortunately, the new wells are only pumping 23 gallons of water per minute, and another water main break has occurred. The small town of Roscoe cannot afford the cost of this disaster of a new water system which would cost around $200,000, or approximately $500 per person.

Other communities and farmers in this area also face this same problem. The WEB project is desperately needed in north central South Dakota. In fact, the WEB organization, the Oahe irrigation subdistrict, and the State of South Dakota are planning to each provide $300,000 this year so construction of the WEB pipeline can begin with the hope that Federal assistance can also be obtained.

S. 1553 would provide for this assistance by reauthorizing the project and release of the $1.9 million which has been appropriated for the project in 1981.

S. 1553 also provides for the study of the CENDAK irrigation project in central South Dakota, and the extension of the Garrison unit into South Dakota along the James River. These two irrigation projects would do a great deal to stabilize and expand South Dakota's agricultural economy.

Finally, the bill would provide the Missouri River Basin program pumping power to the Grass Rope irrigation project and possible other Pick-Sloan Missouri River Basin programs. This is important to make irrigation projects more feasible in South Dakota.

This bill, S. 1553, and a House companion bill, H.R. 4347 with amendments which are included in the clean bill which has been given to you, is supported by the entire South Dakota congressional delegation, the administration, the Governor of South Dakota, and various water groups in South Dakota. Due to the urgency of the need for the WEB project, I urge you to act on this legislation as soon as possible.

I would now like to make a very short statement in support of S. 933, a bill to rehabilitate the Belle Fourche irrigation Project.

The Belle Fourche irrigation project was completed in 1908, and many of its features are outdated and need to be modernized. Presently a great deal of water is lost to the seepage and many safety features are lacking. The rehabilitation of the project would provide irrigation water to 56,000 acres and reclaim additional land lost to seepage. Rehabilitation of the project would also reduce the annual maintenance cost of the project.

The Belle Fourche irrigation project has been very successful and has stabilized and increased the agricultural production in the area. However, to continue this beneficial project, it must be rehabilitated.

I urge you to consider the great success of the project when you evaluate S. 933 and I also urge you to take rapid and favorable action on this bill.

In closing, I would like to thank my staff assistant, Mel Uhlstead, who has done a great deal of work with the groups in the State and has worked overtime in following these closely.

I would also again like to thank my colleague, Senator Abdnor, and his staff, and the committee and its staff for their consideration.

[The prepared statement of Senator Pressler follows:]

TESTIMONY OF SENATOR LARRY PRESSLER
SENATE SUBCOMMITTEE ON WATER AND POWER
WASHINGTON, DC
February 12, 1982

I would first like to thank you for including S. 1553 and S. 933 in your Subcommittee hearings today and for giving me the opportunity to testify in support of these two bills. These bills are of utmost importance to the people of South Dakota.

I will first direct my comments to S. 1553, a bill to reauthorize the WEB pipeline, authorize feasibility studies for CENDAK and the extension of the Garrison Unit into South Dakota, and provide low-cost hydropower to the Grass Rope irrigation project. As you may know, South Dakota gave up over 500,000 acres of prime farm land along the Missouri River to allow the Pick-Sloan Missouri Basin program to be built. The four dams and reservoirs on the Missouri River that were built under this program have provided downstream states with flood control and neighboring states with electric power. However, South Dakota has yet to be compensated for the sacrifice made for the program and S. 1553 will provide South Dakota with at least partial compensation.

S. 1553 would accomplish a number of items to promote water development in South Dakota. The bill would reauthorize the WEB pipeline project and restore the funds that were appropriated for the WEB project in FY 1981.

It should be noted that the Senate authorized the WEB project in 1980 and funds were appropriated by the Senate for the project in 1981, but due to an agreement with the Carter Administration, the project has not yet been started.

The WEB pipeline will provide 51 towns and 3000 farms with good quality water from the Missouri River which is desperately needed in South Dakota.

This need was recently emphasized when the small town of Roscoe, which will be served by WEB, had their wells go bad. As a result, during the month of January, 450,000 gallons of water had been hauled from nearby communities and new wells were drilled at a cost of over $40,000. Unfortunately, the new wells are only pumping 23 gallons of water per minute and another water main break has occurred. The small town of Roscoe cannot afford the cost of this disaster or a new water system which would cost around $200,000 or approximately $500 per person. Other communities and farmers in the area also face this same problem. The WEB project is desperately needed in North Central South Dakota.

In fact, the WEB organization, the Oahe irrigation Subdistrict and the State of South Dakota are planning to each provide $300,000 this year so construction of the WEB pipeline can begin with hope that federal assistance can also be obtained. S. 1553 would provide for this assistance by reauthorizing the project and release the $1.9 million which was appropriated for the project in 1981.

S. 1553 also provides for the study of the CENDAK irrigation project in central South Dakota and the extension of the Garrison Unit into South Dakota along the James River. These two irrigation projects would do a great deal to stabilize and expand South Dakota's agricultural economy.

Finally, the bill would provide Missouri River Basin Program pumping power to the Grass Rope Irrigation Project and possible other Pick-Sloan Missouri River Basin Programs. This is important to make irrigation projects more feasible in South Dakota.

This bill, S. 1553, and a House companion bill, H.R. 4347, with amendments which are included in the clean bill which has been given to you, is supported by the entire South Dakota Congressional delegation, the Administration, the Governor of South Dakota and various water groups in South Dakota. Due to the urgence of the need for the WEB project, I urge you to act on this legislation as soon as possible.

* * * * *

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The Belle Fourche Irrigaton Project has been very successful and has stabilized and increased the agricultural production in the area. However, to continue this beneficial project, it must be rehabilitated. I urge you to consider the great success of the project when you evaluate S. 933 and I also urge you to take rapid and favorable action on this bill.

In closing, I would again like to thank you for giving me this opportunity to testify and look forward to working with you on these bills.

Senator MURKOWSKI. Thank you, Senator Pressler. Senator Wallop?

Senator WALLOP. I have no questions. I will compliment both Senators on their diligent effort to move along these needed projects in the State.

Senator MURKOWSKI. I just have a few questions for the record.

I would ask Senator Abdnor since the Flood Act of 1944 was passed, do you believe that the Federal Government places any confidence or stock in the commitment that the people of your State believe was made to you by the Federal Government?

Senator ABDNOR. I certainly hope so. I am glad to get a chance to say a few words about that because it is such a strong matter for me personally, and Senator Pressler, and all the people in South Dakota.

If you were to ask former Secretary of the Interior Andrus, there was no commitment. Probably in the sense of legal commitment that's right.

Secretary Watt says there is—not a legal. As Secretary Andrus pointed out, there is nothing in the law which requires that South Dakota get anything despite the 500-plus thousand acres that Senator Pressler mentioned, all going off of our tax rolls, some of our prime land out of production, and to date we don't even get much of the power coming out of there, but we have certainly taken care of every one of the States and we have taken care of everyone, giving them water, barge transportation, but we are still sitting there. Our fishing is shared with everyone that wants to come. We are proud of the water. It is the greatest asset any State ever had if you can figure a way to use it, but early in the year I had an opportunity to meet with Secretary Watt in my office, and later with the South Dakota delegation and the Governor, and individually members of our delegation. Secretary Watt has said privately, and he has said this publicly after one of our sessions that the Government does have a strong moral commitment to South Dakota with water development.

The Secretary—now I need not tell you this, but you have never met a man of greater conviction and character. I know he sincerely believes it. He grew up in Wyoming. He knew what took place in situations like this. He feels it is a moral commitment every bit as much as, which should have as much presence as the legal commitment.

Let's remember something. He is not always going to be Secretary of Interior. If you look down the road, we wait until 25 years and wonder what it is going to be like after that—he said I am probably the last Secretary that will ever make that statement, so we feel strongly about the need of this subsection 2(b) of S. 1553 which would direct future Secretaries to take into account South Dakota's sacrifices when considering water projects in our State, and from the events it is clear that South Dakota was supposed to be given large-scale irrigation development as a repayment for the land we gave up, and for as long as we have drought in South Dakota, and let me assure you we have had an awful lot of it over the last number of years, that all our delegation, our Members of the House and the Senate, will be obliged to try to get the Federal Government to live up to its word and enactment of S. 1553 and

S. 933 represents our current effort in considering what we gave up for the benefit of others.

We honestly say this—we make no apology for asking that these bills be passed. Whether in fact the commitment will be honored I guess is really in the hands of our congressional colleagues and particularly this subcommittee, and again I just want to tell you how much we appreciate your giving us a chance to come here and say this, and once again review our legislation.

Thank you.

Senator **Murkowski**. Thank you, Senator Abdnor. Senator Pressler, would you like to expand on that at all?

Senator **Pressler**. I just want to join in those remarks and say that recently I held a meeting in Mobridge, S. Dak., which is a town on the Missouri River, that gave up much of its trade area when the dams were constructed, the farms were taken away, and so South Dakota has made sacrifices for downstream States. This particular town has lost a portion, about one-half of its trade area so to speak, when that happened. Of course, they feel strongly that they would like to have this sort of a project.

Let me also say that I come from a farming area and from a farm, and increasingly our water tables are declining and the quality of water is going down, and for the raising of livestock we need a supply of clean water with what we call rural water systems wherein the water is actually piped to each farm. This really results in greater agricultural productivity, but also it is essential for both human and livestock use, and that is becoming an increasing problem in our State, so we feel we have the Missouri River water there which is of good quality. We want to use it, and this could be a major step.

Senator **Murkowski**. Thank you very much. Senator Wallop, do you have anything?

Senator **Wallop**. I have nothing.

Senator **Murkowski**. We certainly thank both of you gentlemen for your excellent testimony.

Senator **Abdnor**. We thank you very much.

Senator **Murkowski**. Our next witness is the Governor of Wyoming, the Honorable Ed Herschler. Governor, we welcome you to the witness table and look forward to your testimony. I am going to excuse myself from the Chair for a period of time. I am going to ask Senator Wallop, who I am sure needs no introduction to you, to chair, and I will pass the gavel and trust that he takes good care of you.

Thank you, Governor.

Governor **Herschler**. Thank you very much, Senator.

Senator **Murkowski**. I guarantee you that the seat is warm.

Senator **Wallop** [presiding]. I really do want to welcome you here. This has been a matter of growing concern with the State of Wyoming for a long time, and you have had a leadership role in it, as have I. It is something that I think will genuinely benefit us all, and I look forward to your statement.

STATEMENT OF HON. ED HERSCHLER, GOVERNOR OF WYOMING

Governor HERSCHLER. Thank you, Senator Wallop. First of all, I want to thank you and the other members of this committee to afford me the opportunity today to appear and testify in support of your bill and Senator Simpson's bill, Senate 1409.

In the late 1960's, it was recognized that substantial benefits could be realized by enlarging Buffalo Bill Dam in northwestern Wyoming. Congress authorized the Bureau of Reclamation to investigate the potential benefits of an enlargement in 1969 with the passage of Public Law 91-181. The benefits which could be realized include increased hydroelectric power and subsequent power sales revenues, stable and increased water supplies to water users in the Shoshone Valley during the times of shortage, reduction in flood damages, and an opportunity to increase the agricultural production potential in the State of Wyoming.

If one assumes that it takes 25 years to move a federally assisted reclamation project from conception to construction, then I suspect we are nearly halfway done with the enlargement of the Buffalo Bill Dam. In November of 1979, I made an offer to the Secretary of the Interior at that time that the State of Wyoming was ready and willing to enter into discussions to cost share on the enlargement of Buffalo Bill. A short time later I also requested that the Congress consider a three-pronged approach to improve the overall water management potential of the Shoshone Valley. Those three components were to enlarge the Buffalo Bill Dam; two, to replace and increase the hydroelectric potential of the Buffalo Bill Powerplant,. and three, to provide for irrigation opportunities on the Polecat Bench Area in the Shoshone Valley.

S.1409, I think essentially accomplishes the request that I made in late 1979. One element, the enlargement of the Buffalo Bill Dam, is the key to making the water management proposal work. It was my feeling in 1979 and is still my belief today that the only way to get on with enlarging Buffalo Bill is for the State of Wyoming to provide a portion of the funds needed for the enlargement in order to fully realize the water management potential of the Shoshone Valley.

As a result of several years of work, I have proposed to the Wyoming Legislature a water development initiative which will meet most of the water needs of our State. One of the projects I have included in that initiative is the enlargement of the Buffalo Bill Dam. The bill I have had introduced in the Wyoming Legislature establishes a committee to work out the details at the State level of the cost-sharing participation with the Department of the Interior on the enlargement.

Of equal importance, it authorized $42 million in State funds for our commitment to this project. However, our funds are contingent upon the authorization and appropriation of Federal funds to see this proposal through to construction.

I am hoping that we can get the Federal budget cycle and appropriation of funds synchronized with the availability of non-Federal funds. The State of Wyoming I believe is ready to proceed.

In the legislation I have proposed there are at least three issues which need to be resolved between the State and the Bureau of

Reclamation, and I will provide and have provided copies of my proposed legislation to the committee and to the representatives of the Department of the Interior who may be present today.

Senator **Wallop**. We will put that in the record.

Governor **Herschler**. Yes. I attached that to my statement.

I would hope that in the near term the State and the Bureau of Reclamation can begin discussions on these issues.

Earlier I wrote a letter to Secretary Watt asking for several specific questions regarding cost sharing on the Buffalo Bill. I have subsequently received his response which we are now reviewing, and at first blush I think may present some problems. For example, if the State provides 50 percent of the cost for the new powerplant, I would suspect the people of Wyoming would expect the State to receive 50 percent of the power revenues less the wheeling and distribution costs of the Western Area Power Administration. The response from the Secretary indicates a substantially reduced revenue picture for the State.

To a certain extent,we would also be counting on the power revenues to recapture some of our costs in the enlargement and upgrading of Buffalo Bill. In any event, Mr. Chairman, I believe that we can resolve our differences in this matter.

In conclusion, I am hopeful that the State and the Federal Government can get the funding for the enlargement of the Bufflo Bill Dam synchronized, and that the framework for State and Federal cost sharing can be worked out. If this can be accomplished, the State of Wyoming and the Federal Government will have set the stage for a true State/Federal partnership in water development. The modification of Buffalo Bill will be the first in a long line of new water projects whereby this type of partnership could result in more water projects being constructed in less time at a considerable cost savings to all, but more importantly, S. 1409 is implementable, cost effective, and will provide long-term benefits to the people of the Northeast, northeast Wyoming, and to the people of the United States.

I strongly urge this committee to report favorably on S. 1409, and I would also request that the administration fund in its 1983 budget for Buffalo Bill Dam so that together we can see this project to completion in fairly short order.

Thank you very much, Senator Wallop.

[Attachment to Governor Herschler's statement follows:]

House of Intro
____ To Com No. ____________
____ Stand Report Do___Amd___Not___
____ Com Whole Do___Amd___Not___
____ 2nd Reading Amd___
____ 3rd Reading Amd___Pass___Fail___

Second House
____ To Com No. ____________
____ Stand Report Do___Amd___Not___
____ Com Whole Do___Amd___Not___
____ 2nd Reading Amd___
____ 3rd Reading Amd___Pass___Fail___

1982 STATE OF WYOMING 82LSO-274.L2
AG

SENATE FILE NO. 64

Buffalo Bill Dam.

Sponsored by: Senators MOORE, PROFFIT and CHRISTENSEN

A BILL

for

AN ACT relating to the Buffalo Bill Dam in Park county, Wyoming; creating a committee to negotiate a joint venture with agencies of the United States to raise the dam twenty-five feet; providing for execution and implementation of a negotiated agreement which meets certain criteria; providing an appropriation of funds by the legislature; providing an appropriation for committee expenses; and providing for an effective date.

Be It Enacted by the Legislature of the State of Wyoming:

Section 1.

(a) The Buffalo Bill Dam committee is appointed for the purpose of negotiating an agreement with the bureau of reclamation and any other appropriate agency of the federal government to raise the Buffalo Bill Dam on the Shoshone River in Park county, Wyoming, by twenty-five (25) feet in height. The committee shall have nine (9) members as follows:

(i) Four (4) members who reside in the Shoshone River drainage basin, appointed by the governor, one (1) of whom shall be designated as chairman by the governor;

(ii) The state engineer, or his designee;

(iii) The chairman of the Wyoming water development commission, or his designee;

(iv) The administrator of the water division of the department of economic planning and development, or his designee; and

(v) Two (2) members who reside in the Big Horn River drainage basin, appointed by the governor. The attorney general, or his designee, shall provide such advice and assistance as the committee may request.

(b) The agreement shall provide for the sharing of costs of construction, maintenance and operation of the Buffalo Bill Dam facility by the state of Wyoming and the appropriate agency of the United States of America, and shall specify the terms of payment of each party to the agreement. The agreement shall also specify how the additional water impounded by the project shall be divided between the parties and the terms of its use and administration.

(c) The agreement shall consider:

(i) Providing for state ownership of the increased pool;

(ii) Providing for state ownership and receipt of revenues of the increased power capacity;

(iii) Providing for transfer of federal land to units of local government for purposes of relocation;

(iv) Providing for deferral of operation and maintenance costs from the state for ten (10) years or until the sale of the increased storage capacity, whichever is earlier;

(v) Providing that the federal government will pay for all enhancement costs, mitigation costs, other nonreimbursable costs and facilities or components whose primary functions are for federal purposes;

(vi) Providing that repayment to the federal government for any advanced funding shall be from the state share of power revenues and that no interest costs will be charged to project costs allocated to municipal and agricultural uses;

(vii) Providing that any state owned storage is available for sale or other disposition by the state at the foot of the dam; and

(viii) Containing such other terms and provisions that will maximize the beneficial use of Wyoming's water resources in an economic and efficient manner.

(d) If the committee is unable to reach an agreement by December 1, 1982, it shall make a written report of its negotiations and activities to the governor and to the Wyoming legislature by December 15, 1982. Such report shall include recommendations regarding appropriate changes, additions or deletions to the criteria in subsection (c) of this section. The committee shall also provide periodic reports to the governor on the status of negotiations.

(e) The department of economic planning and development shall provide such staff services as the committee may require and if necessary secure assistance from other state agencies. Members of the committee appointed by the governor shall receive per diem and travel expenses in the same manner and amount as state employees.

Section 2. There is appropriated from the general fund to the department of economic planning and development the sum of thirty thousand dollars ($30,000.00), or as much thereof as may be necessary, to pay the per diem and travel expenses of members of the committee.

Section 3. Contingent upon: (1) execution of an agreement in substantial compliance with the criteria set forth in subsections (b) and (c) of section 1 of this act; (2) federal authorization and appropriation of funds to discharge the federal responsibilities under the agreement; and (3) approval of the agreement by the governor, there is appropriated from the Wyoming water development account to the department of economic planning and development the sum of forty-two million dollars ($42,000,000.00), or as much thereof as may be necessary, to pay the state's share of costs under the agreement.

Section 4. If any provision of this act is held invalid, this invalidity shall not affect other provisions of this act which can be given effect without the invalid provisions; and to that end, the provisions of this act are severable.

Section 5. This act is effective immediately upon completion of all acts necessary for a bill to become law as provided by Article 4, Section 8 of the Wyoming Constitution.

(END)

Buffalo Bill Dam. 82LSO-274.L2

FISCAL NOTE

Anticipated REVENUE to:	Fiscal Year 19	Fiscal Year 19
TOTAL ESTIMATED REVENUE		

Anticipated COST to:	Fiscal Year 19 82	Fiscal Year 19
General Fund	$ 30,000.00	
Water Development Account	42,000,000.00	
TOTAL ESTIMATED COST	$42,030,000.00	

1. The bill provides for a $30,000 General Fund appropriation and a $42,000,000 appropriation from the Water Development Account.

2. The bill provides for a nine member committee.

Senator **Wallop**. Thanks, Ed. What is the status of the bill in the legislature? Is it passed?

Governor **Herschler**. It was introduced. As you know, we have a short budget session, and the Appropriations Committee has been there about a month, but the full session only started last Tuesday, and it was one of the first bills introduced. It has bipartisan support, and I have every reason to believe it will pass.

Senator **Wallop**. It got the necessary two thirds?

Governor **Herschler**. Yes, sir, it did.

Senator **Wallop**. That speaks pretty well for its prospects.

Governor **Herschler**. I think it is coming along, sir, and I have heard no opposition to it at all.

Senator **Wallop**. Tell me this. Is it still the State's position that you would like to include Polecat Bench? There is some controversy about it, and I am just wondering how much we ought to hinge our prospects on that.

Governor **Herschler**. Senator, I am not certain. I do know that we have had some preliminary negotiations with the Bureau of Reclamation as to what their attitude might be. We have had a number of people involved. We have held hearings, and that is a controversial issue, Senator, but I am not prepared to say that we ought to abandon it or that we—I think perhaps we need more hearings in the area.

Senator **Wallop**. Well, we will obviously work together on that one.

There is another concern that raises itself a little bit which is essentially a State issue. Assuming you work at your negotiation with the Secretary or with the Bureau on the power marketing, but some of these communities which have traditionally marketed are expressing some concern that the State would be involved in marketing power which they have. Do you see any problems in trying to work out those things with those communities?

Governor **Herschler**. No, I certainly don't, Senator, and I would assume that we would certainly be willing to recognize the obligations that we have to those people that are counting on that power, and I would suspect that if the powerplant is increased as you stated from 5,000 megawatts to 20,000 it would seem to me that if there is extra available power, it would go to the other people, but I think we certainly maintain those commitments.

Senator **Wallop**. Mr. Murkowski has said that he would be glad to work with you and with our delegation here and the administration to reach any accommodation that is necessary in that, so certainly from the standpoint of the subcommittee, therefore, the committee, we shouldn't have any problems in arranging that.

I really again want to compliment you and the Wyoming Legislature on taking the initiative in this cost-sharing program or concept. It was proposed as I recall in the last administration, and received with not much enthusiasm by any State except Wyoming. Now we have got a few project along in that context, and again I think that our State seems to have a quicker appreciation of the need to get these projects on line.

Governor **Herschler**. Senator, I heard your opening statement, and I couldn't agree with you more on what you said about the fact that water is so vital in the West. As you know, we are being looked to to provide a great deal of energy for this country, and of course, we need water development for our municipalities, our agriculture, recreation, and of course, for industrial development. All of those projects that we are looking at like coal gasification, oil and gas development, mining, what have you, require water, and we feel, of course, that we have an obligation to help mitigate the energy problem in our country, and I think it has to be tied to water as the key in Wyoming and in the Western States for the development of energy because without the water, you just can't accomplish anything. We recognize that at the local level.

Let me say right now, Senator, that we have a program now that is presently in addition to the Buffalo Bill Dam that we are commiting, asking our legislature to—it appears very favorable—we are going to commit $100 million a year for water development projects in Wyoming for a 6-year period. We have identified water projects that we feel the State is going to have to finance to the tune of at least $1 billion, so I am sure that we are not attempting to rip off the East, if you will, with our politics.

Senator WALLOP. It is also virtually inconceivable that we would be able to contemplate things such as minimum stream flow and the traditional uses of water in Wyoming in the face of the new uses, industrial uses, that you are talking about. I mean without the addition of more storage, it is just not possible that you can. It is a nice daydream, but it is not fulfillable without more storage, and we would do that.

Governor HERSCHLER. I think just for an example, Senator, one of the things that we are looking at now in Wyoming is the synthetic fuels plant and gasification plants, coal gasification, that they are looking at a minimum of 20,000 acre feet of water per year for that one project, so that you can see that that is something I just suspect the Federal Government will support in the synthetic fuels program, and if they do, it can't be developed in Wyoming without water.

Senator WALLOP. And still have an agriculture and still have a recreation industry and still have towns with some city parks and other kinds of things.

Governor HERSCHLER. People like to drink a little water and take a bath once in a while.

Senator WALLOP. It's good for mixing, too. Thank you very much for your testimony. I wonder if Commissioner Broadbent could testify as to S. 1409 now and then return? If you would like you can stay. Is there a statement that the Bureau has on this?

Commissioner BROADBENT. Yes. We have a statement, Senator. We would be glad to testify at your convenience.

Senator WALLOP. Could you do that now? You are welcome to submit a question.

Governor HERSCHLER. Thank you very much, Senator. I think I will reserve my questions for the Bureau when I can get them off by themselves.

Commissioner BROADBENT. We look forward to that.

Senator WALLOP. Thank you.

Governor HERSCHLER. Thank you, Senator.

Commissioner BROADBENT. Thank you very much, Senator Wallop. It is a pleasure to be before this committee and to have the opportunity to represent the administration and the Bureau of Reclamation.

I have a statement that I would like to present for the record, but I would like to summarize and leave myself open for questions if I might, Senator Wallop.

Senator WALLOP. By all means; the whole statement will be included as part of the record.

STATEMENT OF HON. ROBERT N. BROADBENT, COMMISSIONER, BUREAU OF RECLAMATION, DEPARTMENT OF THE INTERIOR

Commissioner BROADBENT. I am pleased to be here today to testify on Senate bill 1409, which is legislation to authorize modifications of the existing Buffalo Bill Dam and Reservoir of the Shoshone project in Wyoming.

A feasibility study has been completed on the modifications needed at Buffalo Bill Dam and Reservoir. The feasibility report has been reviewed by the Missouri River Basin States and interested Federal agencies. Most of the States and Federal agencies supported the modifications, and no significant adverse comments were received.

Of particular note is the recent cost-sharing support proposed by the State of Wyoming where this project is located. I know Governor Herschler is here, but in a recent letter to Secretary Watt, Governor Herschler indicated that Wyoming and I quote: "* * * may be in a position to proceed with financing a substantial portion of the costs associated with enlarging Buffalo Bill." All of the details of the cost-sharing have not yet been worked out among Reclamation, the Governor's office, and the State legislature. Indications are that the State may be able to up front finance substantial part of the cost.

We are excited about this creative and cooperative method of financing. One of the substantial goals of this administration is to work with the States in financing water projects. We believe that this is part of the new federalism and is consistent with the President's plan for economic recovery. With this kind of positive support from the State, Secretary Watt approved the feasibility report, recommending authorization of the modifications to the Buffalo Bill Dam and Reservoir. This report is still in the process of being reviewed within the executive branch. Because of this, it would be premature for the Department of the Interior to recommend authorization of the modifications to Buffalo Bill Dam and Reservoir at this time.

However, we expect that this review will be completed expeditiously and we hope to be in a position to report its final approval to the committee before this bill is marked up.

We recommend some language changes in the proposed legislation—new wording in section 5 which would have to do with the interest rate;

> The interest rate used pursuant to this act shall be determined by the Secretary of the Treasury, taking into consideration the average market yields on outstanding marketable obligations of the United States with approximately 5 years remaining to maturity during the month preceding the date of this Act. The interest rate so determined shall be redetermined every 5 years to reflect the average market yield

at that time on outstanding marketable obligations with approximately 5 years remaining to maturity.

In section 6 (a), we would like to recommend that it be amended to read as follows, that;

> There is hereby authorized to be appropriated for construction of the Buffalo Bill Dam and Reservoir modifications in the sum of $106,700,000—October, 1982 price levels—plus or minus such amounts, if any, as may be required by reason of ordinary fluctuations in construction costs as indicated by engineering cost indexes applicable to the types of construction involved here in and, in addition thereto, such sums as may be required for operation, maintenance, and replacement of the works of said modifications. Providing that such sums authorized to be appropriated for construction or operation, maintenance, and replacement shall be reduced by the amounts contributed to the project under the provisions of section 7 of this Act.

We would like to suggest a new section 7 which would be a cost and revenue sharing proposal by the State of Wyoming. The new section 7 would read this way, that;

> The Secretary of the Interior is authorized to transfer title to any of the modified works, or portions thereof herein authorized, to the State of Wyoming and to enter into contracts with the State of Wyoming, upon such terms and conditions as he deems necessary, for the transfer of such title, the division of additional water impounded by the modifications, the sharing of revenues, from such modifications, and the sharing of the costs of construction, operation, maintenance, and replacement of the modification of Buffalo Bill Dam and Reservoir.

The present sections 7 and 8 would then have to be renumbered as sections 8 and 9. Mr. Chairman, that concludes briefly a summarization of the statement. I would like to submit my full statement for the record and I am available for any questions you might have.

Senator WALLOP. Thank you very much for your statement and encouraging words. If we do get that favorable report that you anticipate in the Committee, it will be the first one in the Congress in 12 years and we may not know how to proceed. I think we'll find a way as soon as you get that to us.

Commissioner BROADBENT. I think the Department of Interior, particularly the Bureau of Reclamation, feels much the same, Senator. We haven't had one for a long time, and it is my pleasure to be in an administration that seems to want to have one.

Senator WALLOP. Me, too. Let me ask you this. Your suggested changes for section 7 would be those which you feel would be necessary to authorize you to engage in these discussions for Governor Herschler?

Commissioner BROADBENT. As I understand it, it would allow us to take care of some of the concerns hopefully of Senator Herschler, I mean of Governor Herschler.

Senator WALLOP. Don't say that.

Commissioner BROADBENT. Sorry about that—of Governor Herschler, and we will be happy to work with you, but I think it would answer most of his concerns about the provisions for division of, not only the cost, but also the resource.

Senator WALLOP. Well, I really hope, and I suspect that and sense from your testimony and from the willingness of the Secretary to respond promptly to Governor Herschler's inquiry, and that of the delegation, that these negotiations can proceed with a good deal of prospects, that there is an interest both in the Federal Government and the State of Wyoming that it can be resolved equitably between them.

Should that take place, I think it is a model for the rest of the country, and I would be really pleased to see us in that role, and I would be pleased to have you the Commissioner that was involved in it. I really think that there is a prospect not only for new federalism, but for accountability, and to relieve us of some of the constant browbeating and criticism by those who do not understand what benefits this country has received from the program that has existed since 1902.

With that, I have no further questions. You may if you wish proceed as you were otherwise scheduled on the bills in front of the committee.

Commissioner **Broadbent**. Mr. Chairman, if I might, before we forget this one, I would like to only indicate again that it would be our pleasure to work with the congressional delegation and with the Governor and with the legislature on the proposed legislation that may be introduced in the State of Wyoming to make sure that it will meet the requirements for appropriate cost sharing. We will be happy to work with you and with the Governor to assure that we don't find any hitches as the bill is enacted, and we would be hopeful that we will have a positive feasibility report to you from the Executive Branch before you get around to markup.

Senator **Wallop**. Fine. I appreciate it, and if I have anything to do with it, that markup period will begin as quickly as we can persuade the committee chairman to do it, and of course, it is in the interest of everybody.

Governor Herschler testified about one of the critical elements, and that is when somebody, when an entity, the Government, has the resources that it can commit, the time to do that is when they are there and not some later time when the synchronization is gone and either one of the other is no longer able to proceed.

We will take a brief recess while the reporter changes her tape.

[A brief recess was taken.]

Senator **Wallop**. The committee will reconvene, and Commissioner, if you would proceed?

Commissioner **Broadbent**. Senator Wallop, we have I think four more bills that are before you today that we would like to comment on. The next bill is Senate bill 698, the Yuma County Water Users' bill, for the association to relocate its headquarters. Again, I appreciate the opportunity to be here, and I would like to submit it for the record and include it and all of the rest of them, I would like to submit our statement for the record and maybe in order to move along to just summarize what we have on all these bills.

Senator **Wallop**. By all means; all the statements will be included.

Commissioner **Broadbent**. I am sure you have heard the history from Senator DeConcini. I would like to just relay our recommendation.

The building occupied by the Water Users is currently adequate for their needs and they have indicated that they have no desire to relocate.

We understand that they want to be cooperative and community spirited, and to this extent they are willing to move if a suitable site can be located and acquired, providing that they are not financially burdened, so that one more building in the fort may be opened to the public.

We have no objection to leasing or selling a suitable plot of land on which a new building could be located. As a matter of fact, we have land under our jurisdiction which we have offered as a suitable location for a new headquarters. With respect to a new building, however, we believe that such arrangements, financial and otherwise, should remain a matter between the association and the city of Yuma.

Accordingly, we do not favor the enactment of this legislation. Nevertheless, if the city can agree to provide the association with an appropriate alternate facility, we will cooperate to the fullest extent possible in assisting with the relocation.

Thank you very much, Senator.

Senator WALLOP. I have one question which Mr. Brown will ask.

Mr. BROWN. Mr. Commissioner, I am familiar with the process of submitting legislative reports and recommendations to the Office of Management and Budget.

In regard to the Yuma bill, can you state for the record, sir, what the Bureau's original position was on the measure?

Commissioner BROADBENT. I am not sure what the original position was on this bill or on the bills that were introduced previously?

Mr. BROWN. This bill, sir.

Commissioner BROADBENT. As I recall, we recommended that there be an appropriation of $2½ million dollars which would be reduced by the appraised value of the piece of property in Yuma that is now occupied by Yuma, and that there be a repayment contract entered into for the repayment of that cost to the Federal Government at either the market value of the rental rate of that piece of property, or the cost amortized at the present interest rate.

Mr. BROWN. Thank you, Mr. Commissioner. As far as the operation and maintenance of the site, who pays for that at this time, of the headquarters?

Commissioner BROADBENT. The operation and maintenance is paid for under a contract that they have with the United States.

Mr. BROWN. And they pay for it, the association pays for it, the maintenance of the structure?

Commissioner BROADBENT. I think. That is the best of my recollection. That's right, sir.

Mr. BROWN. Thank you, Mr. Commissioner.

Senator WALLOP. No further questions, and I think we can proceed to the next bill.

Commissioner BROADBENT. The next bill is Senate bill 933, to authorize the rehabilitation of the Belle Fourche irrigation project and other purposes.

Mr. Chairman, the proposed bill would authorize the appropriation of $42 million. These expenditures would encompass construction activities associated with the development of the new facilities, and to rehabilitate existing works, to provide water conservation, recreation, and fish and wildlife benefits.

This administration is opposed to the proposed bill. I do not believe that this program would be in the best interests of the Federal taxpayer, nor should we require the power customers of the Pick-Sloan Missouri Basin project to repay 70 percent or more of these rehabilitation and betterment costs.

Mr. Chairman, again I would like to thank you for the opportunity to testify, and we would be happy to answer any questions. Our statement is a little longer, and I will submit it for the record.

Senator WALLOP. The statement will be included in the record in its entirety.

Commissioner BROADBENT. Do you have questions?

Mr. BROWN. Yes, Mr. Commissioner, a question similar to Senator Murkowski's question on the Yuma bill. Regarding the initial report which was submitted to the Office of Management and Budget, were there significant changes as far as the views of the Bureau of Reclamation after that report had been reviewed?

Commissioner BROADBENT. No, sir, not on this bill.

Mr. BROWN. Although your statement dealt specifically with the Belle Fourche project, I noted your comment that the administration's policies require direct beneficiaries to pay for the costs of the benefits received.

What reclamation projects has your study mentioned, endorsed by the administration, that currently meet this criteria?

Commissioner BROADBENT. Most of those that are——

Mr. BROWN. Of course, Mr. Commissioner, you may submit material to the record later on.

Commissioner BROADBENT. I think I better submit that for the record.

Mr. BROWN. It's not fair to catch you flatfooted.

Commissioner BROADBENT. Could I do that? I would like to submit that for the record.

Mr. BROWN. An appropriate followup question, of course, would be in your estimation, could any of the existing irrigation projects which have been constructed in the West have been built under this criteria? Perhaps you would care to answer that one for the record later on?

Commissioner BROADBENT. I would like to answer that one for the record, too, if you will give me that opportunity.

[Subsequent to the hearing Mr. Broadbent supplied the following:]

BELLE FOURCHE

Question: Mr. Brown. What Reclamation projects has your study mentioned, endorsed by the Administration, that currently meet these criteria?

Answer: Commissioner Broadbent. When a water user organization requests funds to rehabilitate and/or upgrade its existing facilities, such as that proposed for the Belle Fourche Project, there are two authorities that can be used by the Bureau of Reclamation. These include the Rehabilitation and Betterment (R&B) Act of 1949, as amended, and the Small Reclamation Projects Act of 1956, as amended. Under each of these laws, the organizations must repay the full costs associated with the work program to be undertaken. Under current policy, the water user payment capacity is evaluated to establish priorities for requesting funds from the Congress. Because of recent fiscal constraints, imposed by this and previous administrations, Federal funds have been made available only for those projects which can be fully repaid within 40 years or less.

Federal funds made available to 79 water user organizations, since enactment of the 1949 R&B Act, totaled $162.3 million through January 1, 1982. All of these funds are fully repayable without power revenue assistance. Funds made available to the irrigators for these contracts are, however, interest-free.

The following R&B proposals, included in the budgets for fiscal years 1982 and 1983, will be repaid by the water users in 40 years or less:

Project	State	Water Users Organization	Cost
Grand Valley	CO	Orchard Mesa Irrigation District	$ 2,816,000
Uncompahgre	CO	Uncompahgre Valley Water Users Association	5,640,000
P-SMBP	MT	Helena Valley Irrigation District	2,000,000
Huntley	MT	Huntley Project Irrigation District	7,800,000
Strawberry Valley	UT	Strawberry Water Users Association	310,000
Okanogan	WA	Okanogan Irrigation District	11,669,000
Yakima	WA	Granger Irrigation District	1,330,000
Yakima	WA	Outlook Irrigation District	2,936,000
Yakima	WA	Sunnyside Board of Control	15,883,000
Yakima	WA	Sunnyside Valley Irrigation District	15,936,000
Yakima	WA	Yakima-Tieton Irrigation District	64,833,000
Shoshone	WY	Deaver Irrigation District	1,600,000
Shoshone	WY	Heart Mountain Irrigation District	5,500,000
Shoshone	WY	Willwood Irrigation District	1,600,000
Total Program, Fiscal Years 1982 and 1983			$139,853,000

As of January 1, 1982, there are repayment contracts covering 106 loan applications pursuant to the Small Reclamation Projects Act. Federal funds advanced to the water user organizations under this authority total about $341.5 million. The Bureau is now considering final or draft applications for 15 projects which would require an additional $152.8 million of Federal funds. Interest is paid, however, for any irrigation costs associated with excess land holdings and domestic, industrial or municipal water supply, or commercial power.

BELLE FOURCHE

Question: Mr. Brown. An appropriate follow-up question, of course, would be, in your estimation, could any of the existing irrigation projects which have been constructed in the West have been built under these criteria?

Answer: Commissioner Broadbent. As you can see from the foregoing listing, there is a relatively large number of existing Reclamation projects that are being updated and rehabilitated under the criteria that requires the direct beneficiaries to pay for the costs of the benefits that they receive. It would appear that the Belle Fourche Project represents the kind of project that should be able to obtain the needed improvements under the authority of the R&B Act. Such projects tend to demonstrate that the initial Federal investment has been worthwhile and that the project can continue with only modest assistance from the Government. The Belle Fourche Project water users do not have sufficient payment capacity to repay all of the costs associated with the more comprehensive program as proposed by S.933. On the other hand, the WEB pipeline project, as set forth in S.1553, represents a new water use proposal that has considerable potential for meeting unique water needs in South Dakota. Reclamation law provides the means to make that initial investment. Greater financial assistance through surplus power revenues is generally required to get such a project started. Once it is started, we would expect that the direct beneficiaries would seek additional Federal assistance, if any, under the R&B Act.

Mr. **Brown**. Thank you. Thank you, Senator Wallop.

Senator **Wallop**. Not at all; I might just say, though, that it is not a new concept at least in my term in the Senate that we get into this business of user fees. We did, of course, attempt that in the waterway users. That is the Corps of Engineers, but in a time when the whole country is getting tight, this is at least a concept that has to be considered. I don't know as it has to be done in its entirety, and certainly it is hard to bring people on the criteria late that they have not been led to believe would be the criteria, but nonetheless, I think it is important that the consideration take place—the reclamation I mean. It is a matter of standard history that doesn't seem to be taught in many places that reclamation has always paid a major portion of its share.

Commissioner **Broadbent**. That is correct, and I think Reclamation is proud of the fact that a major portion does get repaid to the Federal Treasury over a period of years, and true, in some cases it is without interest, but most of the costs of reclamation projects are repaid to the Treasury, and I think that is a benefit that isn't recognized by many other grant and aid programs in the Federal Government.

Senator **Wallop**. That is absolutely true. I wish we had broader understanding.

Commissioner **Broadbent**. I don't hesitate to look at you people and say that you have to have a tough job to administer this. There are always special occasions and special exceptions that have to be looked at, and that is the job that the Congress has, and we look forward to supporting you in any way we can to make that job easier.

Senator **Wallop**. Thank you very much. If you would proceed then?

Commissioner **Broadbent**. The next bill that I would like to comment on is Senate bill 1553, which is the bill on the WEB pipeline project and other developments in South Dakota. Again, I would like to submit my full statement for the record and I would like to probably more completely comment on this bill because it is more comprehensive, and it has more things in it, but at the same time leave plenty of time for questions.

Mr. Chairman, Senator Murkowski, it is a pleasure to be here before you today. I have one or two more bills to go through, and the one we are on is Senate bill 1553 which is the South Dakota bill.

Senator **Murkowski** [presiding]. Thank you, Mr. Broadbent.

Commissioner **Broadbent**. The Federal Government's water resources development program in South Dakota has been delayed since the Oahe Conservancy Subdistrict, which holds the master repayment contract, stopped supporting the Oahe unit of the Pick-Sloan program in 1978, and called for its deauthorization.

Mr. Chairman, the Department of the Interior supports the WEB pipeline project and will do its utmost to work with Congress and the State of South Dakota to see it fully developed as rapidly as possible. Since Senate bill 1553 would direct Interior to implement WEB under the guidelines of the Farmer's Home Administration program, it would be necessary for us to coordinate closely with the

Department of Agriculture. We are committed to seeing WEB move forward and will not object to this arrangement.

With respect to section 2(a) of the bill, we are ready to undertake appraisal studies of the CENDAK project and the extension of the Garrision Diversion unit service to the Upper James River Basin. We have reservations, however, about further studies of the Pollock-Herreid unit since recently completed advance planning studies indicate that a smaller project is not justifiable. We are willing but not enthusiastic about reexamining this potential;

The additional studies in section 4 to be identified by the Governor must be defined prior to our judgment on this aspect of the bill. As drafted, we cannot support this type of open-ended authorization. Those identified studies should be considered separately on a case-by-case basis.

Section 2(b) would, one, direct the Secretary to take into account the loss of lands inundated by the Pick-Sloan Missouri Basin program Missouri reservoirs, and two, preserve the criterion under which the Oahe unit was authorized. We have no objection to the first item. However, we object to the second. Oahe unit authorizing criteria were appropriate for the economic conditions in the mid-1960's, the time of the Oahe authorization. While recognizing South Dakota's special situation, we believe it would be unwise to use outdated standards and procedures to develop water projects to satisfy the needs of the future.

We have no objection to section 2(c) which would require the Secretary to report to Congress his findings on the studies in section 2(a) along with recommendations for the disposition of the Oahe unit, development of the Pollock-Herreid unit, and Federal Government involvement in other projects proposed by the State.

Section 3(b) needs clarification. The definition of which features were designed for and could only be used for delivery of irrigation water to Spink and West Brown Irrigation District is ambiguous. This section also could be interpreted as granting the Secretary discretion to begin construction of those Oahe unit features that might be required to serve another project before feasibility studies are completed and the new project is authorized.

We believe it would be preferable to place a full moratorium on the Oahe unit construction until a new project utilizing the Oahe unit features is authorized.

Alternative to that, any construction of Oahe unit features prior to authorization of such a new project should only be undertaken with funds provided by the State of South Dakota as a State contribution with adequate protection for recovery of the existing Federal investment.

Section 4 places the Secretary in an untenable position. Presumably its intent is to make 2½ mil per kilowatt hour power available to anyone who wishes to develop the project resembling one mentioned in Senate Document 191 if the Governor or Indian tribe requests it. We believe the intent of the Flood Control Act of 1944 and related subsequent acts is such that project pumping power should be made available only to authorized participating Pick-Sloan programs. This section as currently written encourages the development of projects without a determination of their feasibility, extends Pick-Sloan benefits to private developments which would be inconsistent with Federal laws authorizing the project development, and jeopardizes the financial integrity of the Pick-Sloan Missouri Basin program.

Authorization of Pick-Sloan power rates must be on a case-by-case basis.

We have no objection to section 2(d) as long as it is understood that it only represents the authority to contract with the state as the sole source of accomplishing study work and does not abrogate the responsibilities and legal requirements of the Secretary, the administration, and the Congress, for review and decisionmaking during and after completion of any state contract study. We have no objection to section 2(e).

Section 3(a) would authorize the Secretary to cancel the Oahe contracts and release reserved funds accumulated by the Oahe Conservancy Subdistrict under the master contract. In that light, we question whether the Secretary may unilaterally terminate the contracts. Since the reserved funds were collected from the taxpayers of the Oahe Conservancy Subdistrict, consideration should be given to an equitable refund such as the money should go to the taxpayers or otherwise be expended to their benefit.

This section also should specify how the Oahe unit repayment obligations for the approximate $40 million plus interest during construction should be discharged. We recommend it be treated as a deferred cost to be assumed by the water users of any future project that utilizes facilities already constructed after the time of the Oahe unit contract cancellation. Consideration should be given to setting a time limit for the Oahe unit contract cancellation. We understand that the most immediate concern is providing such benefits for the Grass Rope unit serving the Lower Brule Indian Reservation. Some $2.6 million for initiation of construction of that project is included in the fiscal 1982 budget for the Bureau of Indian Affairs.

We recommend that S. 1553 be amended to reflect the issues noted above. Since our amendments are lengthy, I am submitting for the committee's consideration a marked-up copy of 1553 with the Interior proposed amendments inserted; with the exception of section 4, those amendments are identical to those presented to the House of Representatives on the companion bill, H.R. 4347. I might comment that it is my understanding that after listening to Senator Abdnor, that the delegation approves of the comments of the Department, and I am also told that they would approve of the comments on section 4.

Mr. Chairman, that completes my statement. I would be happy to answer any questions you have.

[The prepared statements of Commissioner Broadbent follow:]

STATEMENT OF THE COMMISSIONER OF RECLAMATION WITNESS BEFORE THE SENATE SUBCOMMITTEE ON WATER AND POWER OF THE COMMITTEE ON ENERGY AND NATURAL RESOURCES

February 12, 1982

Mr. Chairman and members of the subcommittee, we are appearing today to testify on S.698, a bill "To authorize the Secretary of the Interior to assist the Yuma County Water Users' Association, Arizona, to relocate the headquarters of such association." I appreciate the opportunity to testify on this bill.

Preserving our Nation's history and making available to the public historically significant areas and structures is a responsibility of Federal agencies emphasized in several laws, particularly the National Historic Preservation Act of 1966, and various executive orders and administrative policies. The Bureau of Reclamation takes pride in its leadership in this area of national concern. One example of this leadership is the care and upkeep we have provided for the portion of the Yuma Crossing and Associated Sites National Historic Landmark which is under our control. The structural integrity of the buildings has been retained, and where necessary restored so that they will be preserved for the enjoyment and edification of future generations.

Now, I would like to give you a short summary of the historical events leading to the introduction of S.698. On August 31, 1903, by Presidential Order, the abandoned Fort Yuma Military Reservation was set aside for the use of the Reclamation Service. The Yuma Project was authorized in 1904 and the properties of the two then existing canal companies were purchased.

The Yuma County Water Users' Association has occupied a portion of the original Quartermaster's Depot, one of the military reservation buildings, as a part of the Yuma Reclamation project's facilities. This building was included in the repayment contract between the United States and the Association. When the contract was paid up, the Depot along with other protect features was turned over to the Association's management for operation and maintenance purposes. The underlying land was leased to the Association on a 50 year lease for a minimal fee.

The city of Yuma through the Yuma Historical Society has managed the major portion of the Fort Yuma area as a historical recreation site. For the past several years the Historical Society has expressed an interest in obtaining the Quartermaster's Depot to go along with the rest of the area. The proposed bill is designed to accomplish this.

The building occupied by the Water Users is currently adequate for their needs and they have indicated that they have no desire to relocate. We understand they want to be cooperative and community spirited, and, to this extent they are willing to move if a suitable site can be located and acquired, providing that they not be financially burdened, so that one more building in the Fort may be opened to the public.

We have no objection to leasing or selling a suitable plot of land on which a new building could be located. As a matter of fact, we have land under our jurisdiction which we have offered as a suitable location for a new headquarters. With respect to a new building, however, we believe that such arrangements, financial and otherwise, should remain a matter between the Association and the city of Yuma.

Accordingly, we do not favor the enactment of this legislation. Nevertheless, if the city can agree to provide the Association with an appropriate alternative facility, we will cooperate to the fullest extent possible in assisting with the relocation.

Again, thank you for the opportunity to discuss the relocation of the Yuma County Water Users' Association headquarters and the transfer of the present headquarters, a historic building known as the Yuma Quartermaster's Depot, to the city of Yuma. I would be pleased to answer any questions you have.

Statement of Robert N. Broadbent, Commissioner, Bureau of Reclamation of the Department of the Interior, Representing the Department, before the Senate Committee on Energy and Natural Resources, Subcommittee on Water and Power, on S.933 to authorize rehabilitation of the Belle Fourche irrigation project and for other purposes.

February 12, 1982

Mr. Chairman and members of the subcommittee, I am pleased to appear here today to testify on S.933.

The proposed bill would authorize an appropriation of $42 million (January 1981 price levels), plus or minus amounts justified by reason of fluctuations in construction cost indexes for the types of construction involved. These expenditures would encompass construction activities associated with the development of new facilities and to rehabilitate existing works to provide water conservation, recreation, and fish and wildlife benefits. The general plan of the existing Belle Fourche Project, previously authorized for construction May 10, 1904, would be modified and reauthorized as the "Belle Fourche Unit" of the Pick-Sloan Missouri Basin Program. Such reauthorization would allow surplus Pick-Sloan Missouri Basin Program power revenues to be used for repaying costs assigned to irrigation that are above the water users' ability to pay.

I am opposed to the proposed bill. The proposed bill is contrary to the Administration's policy requiring direct beneficiaries of Federal projects to pay for the costs of the benefits they receive. I do not believe that this program would be in the best interests of the Federal taxpayer, nor should we require the power customers of the Pick-Sloan Missouri Basin Program to repay 70 percent or more of these rehabilitation and betterment costs.

Section 2 of the bill would require the Secretary of the Interior to negotiate a repayment contract which would fix the obligation to be repaid by the water users in not more than 40 years from its execution. Since our policy is to have an executed contract prior to construction, the proposed bill would reduce the time period for repayment to something less than 40 years. Our estimate shows that even if repayment were extended to 50 years, at least $30.3 million of future net power revenues will be required to assist in the repayment of the proposed work, exclusive of any miscellaneous revenues.

As you know, the majority of the expenditures would be assigned to irrigation, and under Reclamation law, irrigation costs are considered interest-free. The cost of the program would have to be financed through tax revenues and/or by public debt instruments. Such financing carries real interest costs for the general taxpayer and would not be returned by the local beneficiaries or power customers.

Mr. Chairman, thank you for the opportunity to appear before this committee. I will be pleased to respond now to questions that you or other committee members may have.

Statement of Robert N. Broadbent, Commissioner, Bureau of Reclamation, Department of the Interior, before the Subcommittee on Water and Power, Senate Committee on Energy and Natural Resources, on S. 1409, a bill "To Authorize Modification of the Existing Buffalo Bill Dam and Reservoir, Shoshone Project, Pick-Sloan Missouri Basin Program, Wyoming," February 12, 1982

My Chairman, my name is Robert N. Broadbent. I am Commissioner of the Bureau of Reclamation. I am pleased to appear today to testify on S. 1409, legislation to authorize modifications to the existing Buffalo Bill Dam and Reservoir of the Shoshone Project in Wyoming.

A feasibility study has been completed on the modifications needed at Buffalo Bill Dam and Reservoir. The feasibility report has been reviewed by the Missouri River Basin States and interested Federal agencies. Most of the States and agencies supported the modifications and no significant adverse comments were received. Of particular note is the recent cost sharing support proposed by the State of Wyoming where the project is located. In a recent letter to Secretary Watt, Governor Herschler indicated that Wyoming ". . . may be in a position to proceed with financing a substantial portion of the costs associated with enlarging Buffalo Bill." Although the details of the cost sharing have not yet been worked out among Reclamation, the Governor's office, and the State Legislature, indications are that the State may be able to upfront finance a substantial part of the cost. We are excited about this creative and cooperative method of financing. One of the substantial goals of this Administration is to work with the States in financing water projects. We believe that this is part of the new Federalism and is consistent with the President's plan for economic recovery.

With this kind of positive support from the State, Secretary Watt approved the feasibility report recommending authorization of the modifications to Buffalo Bill Dam and Reservoir. The report is still in the process of being reviewed within the Administration. Because of this it would be premature for the Department of the Interior to recommend authorization of the modifications to Buffalo Bill Dam and Reservoir at this time. However, we expect that this review will be completed expeditiously and we hope to be in a position to report its final approval to the Committee before this bill is marked up.

The following is a summary of the information in the Secretary's feasibility report.

Buffalo Bill Dam is situated in a narrow gorge on the Shoshone River about 5 miles west of Cody, Wyoming. The existing dam was completed in 1910 to provide irrigation water for the 88,000 acres of land in the Shoshone Project. The 5,600 kilowatt Shoshone Powerplant and 5,000 kilowatt Heart Mountain Powerplant were added in 1933 and 1948, respectively. Recreational facilities, both private and public, have been established to accommodate recreational needs which were unforeseen in early project years. The now obsolete Shoshone Powerplant has been shut down.

Based on October 1982 prices, the total construction cost of the modifications is estimated to be $106,700,000. When the annual equivalent cost of $9,418,000 including interest during construction and operation, maintenance, and replacement is compared to the annual direct benefits of $9,852,000 over a 100-year period at 7-3/8 percent interest, the benefits exceed the cost by $534,000. This amounts to a benefit cost ratio of about 1.06 to 1.

The cost sharing arrangements now being discussed with the State will alter the repayment analysis shown in the feasibility report. Absent the cost sharing, the report shows: (1) the costs allocated to power would be repaid in about 6 years without increasing present Pick-Sloan Missouri Basin Program power rates; (2) the costs allocated to Municipal and Industrial Water associated with the 74,000 acre-feet increased yield would be repaid within 50 years through a contract negotiated with the State under provisions of the Reclamation Project Act of 1939 or the Water Supply Act of 1958; and (3) one-fourth of the separable fish and wildlife enhancement costs would be repaid under a contract to be negotiated in accordance with the Federal Water Project Recreation Act of 1965, as amended. Non-reimbursable costs associated with Highway Improvement, Recreation, Fish and Wildlife, and Environmental Quality would amount to about one-third of the cost of the project.

However, we recommend the following language changes in S. 1409 or other authorizing legislation. We recommend the following language on interest rate be inserted in lieu of Section 5:

> The interest rate used pursuant to this Act shall be determined by the Secretary of the Treasury, taking into consideration the average market yields on outstanding marketable obligations of the United States with approximately 5 years remaining to maturity

during the month preceding the date of enactment of this Act. The interest rate so determined shall be redetermined every 5 years to reflect the average market yield at that time on outstanding marketable obligations with approximately 5 years remaining to maturity.

Section 6(a) should be amended to read as follows:

Sec. 6(a) There is hereby authorized to be appropriated for construction of the Buffalo Bill Dam and Reservoir modifications the sum of $106,700,000 (October 1982 price levels) plus or minus such amounts, if any, as may be required by reason of ordinary fluctuations in construction costs as indicated by engineering cost indexes applicable to the types of construction involved herein and, in addition thereto, such sums as may be required for operation, maintenance and replacement of the works of said modifications. Providing that such sums authorized to be appropriated for construction or operation, maintenance, and replacement shall be reduced by the amounts contributed to the project under the provisions of Section 7 of this Act.

Also, the following wording should be added to S. 1409 to provide for the cost and revenue sharing by the State of Wyoming as a new Section 7 and the present Sections 7 and 8 should be renumbered.

Section 7. The Secretary of the Interior is authorized to transfer title to any of the modified works, or portions thereof herein authorized, to the State of Wyoming and to enter into contracts with the State of Wyoming, upon such terms and conditions as he deems necessary, for the transfer of such title, the division of additional water impounded by the modifications, the sharing of revenues from the modifications, and the sharing of the costs of construction, operation, maintenance, and replacement of the modification of Buffalo Bill Dam and Reservoir.

Sections 7(a), (b), (c), (d), (e) and (f). Renumber to Sections 8(a), (b) (c), (d), (e) and (f).

Section 8. Renumber to Section 9.

Mr. Chairman, that concludes my statement on S. 1409. I would be happy to answer any questions that you or the other subcommittee members might have.

Statement of Robert N. Broadbent, Commissioner, Bureau of Reclamation, Department of the Interior, before the Senate Subcommittee on Water and Power, Senate Committee on Interior and Insular Affairs, on S. 1553 to Authorize the Secretary of the Interior to Proceed with Development of the WEB Pipeline, and Other Purposes in South Dakota

February 12, 1982

Mr. Chairman, I am pleased to appear before your committee today to testify on S. 1553.

The Federal Government's water resources development program in South Dakota has been delayed ever since the Oahe Conservancy Sub-District, which holds the master repayment contract, stopped supporting the Oahe Unit of the Pick-Sloan Missouri Basin Program in 1978 and called for its deauthorization. The Department's position on the Oahe Unit at that time was based on the Carter Administration's Water Project Review which recommended against further construction. Construction of the Oahe Unit was halted.

In attempting to reestablish the Federal program in South Dakota, the Department, in 1980, identified the WEB Pipeline Project as having widespread local and State support. The ensuing compromise worked out between Departmental and South Dakota officials, resulted in the enactment of Public Law 96-355, on December 12,1980.

As you are aware, Section 9 of that Act: (1) authorized the WEB Pipeline Project; (2) authorized appropriation of $1.9 million in fiscal year 1981 for WEB; (3) provided that if legislation to deauthorize the Oahe Unit is not enacted prior to September 30, 1981, the authorization for WEB appropriation would terminate; (4) Directed the Secretary of the Interior to transfer appropriated funds for WEB to the Secretary of Agriculture; and (5) directed the Secretary of Agriculture to develop WEB under the Farmer's Home Administration regulations.

During fiscal year 1981, the $1.9 million called for by the Act was appropriated to the Department of the Interior which was proceeding to transfer it to the Department of Agriculture. That transfer was terminated at the recommendation of both the House and Senate Appropriations Committees. The Supplemental Appropriations and Rescission Act, 1981 (Public Law 97-12) deferred the $1.9 million from availability for obligation unless and until legislation has been enacted deauthorizing the Oahe Unit by September 30, 1981. Interior's authority to make funds available for WEB under the Act expired on September 30, 1981.

Mr. Chairman, the Department of the Interior supports the WEB Pipeline Project and will do its utmost to work with the Congress and the State of South Dakota to see it developed as rapidly as possible. Since S. 1553 would direct Interior to implement WEB under guidelines of the Farmer's Home Administration program it would be necessary for us to coordinate closely with the Department of Agriculture. We are committed to seeing WEB move forward and will not object to this arrangement.

With respect to section 2(a) of the bill, we are ready to undertake appraisal studies of the CENDAK project and the extension of Garrison Diversion Unit service to the Upper James River Basin. We have reservations, however, about further studies of the Pollock-Herreid Unit since recently completed advance

advance planning studies indicate that a smaller project is not justifiable. We are willing but not enthusiastic about reexamining this potential. The additional studies in subsection (4) to be identified by the Governor must be defined prior to our judgement on this aspect of the bill. As drafted, we cannot support this type of open-ended study authorization. Those identified studies should be considered separately on a case by case basis.

Section 2(b) would (1) direct the Secretary to take into account the loss of lands inundated by Pick-Sloan Missouri Basin Program Missouri reservoirs, and (2) preserve the criteria under which the Oahe Unit was authorized (unless otherwise consented by the State) for planning and implementation of the projects enumerated in Section 2(a). We have no objection to the first item. However, we object to the second. Oahe Unit authorizing criteria were appropriate for economic conditions at the time of authorization. The Oahe Unit was formulated under economic and social conditions different from those that prevail in the 1980's. For example, a discount rate of 3-1/4 percent for computing present value of costs and benefits is clearly inappropriate today. While recognizing South Dakota's special situation, we believe it would be unwise to use outdated standards and procedures to develop water projects to satisfy the needs of the future.

We have no objection to section 2(c) which would require the Secretary to report to the Congress his findings on the studies in section 2(a) along with recommendations for disposition of the Oahe Unit, development of the Pollock-Herreid Unit, and Federal involvement in other projects proposed by the State.

Section 3(b) needs clarification. The definition of which features were designed for and could only be used for delivery of irrigation water to Spink and West Brown Irrigation District is ambiguous. This section also could be interpreted as granting the Secretary discretion to begin construction of those Oahe Unit features to serve another project before feasibility studies are completed and the new project is authorized. We believe it would be preferable to place a full moratorium on the Oahe Unit construction until a new project utilizing Oahe Unit features is authorized. Alternative to that, any construction of Oahe Unit features prior to authorization of such a new project should only be undertaken with funds provided by the State of South Dakota as a State contribution with adequate protection for recovery of the existing Federal investment.

Section 4 places the Secretary in an untenable position. Presumably its intent is to make 2-1/2 mil per kilowatt hour power available to anyone who wishes to develop a project resembling one mentioned in Senate Document 191 if the Governor or an Indian Tribe requests it. We believe that the intent of the Flood Control Act of 1944 and related subsequent acts is that such "project pumping power" should be made available only to duly authorized participating Pick-Sloan Missouri Basin Program projects. This section, as currently written, encourages the development of projects without a determination of their feasibility, extends Pick-Sloan benefits to private developments which would be inconsistent with Federal laws authorizing project development, and jeopardizes the financial integrity of the Pick-Sloan Missouri Basin Program. Authorization of Pick-Sloan power rates must be on a case by case basis.

We have no objection to section 2(d) as long as it is understood that this section only represents authority to contract with the State as a sole source of accomplishing study work and does not abrogate the responsibilities and legal requirements of the Secretary, the Administration, and the Congress for review and decisionmaking during and after the completion of any State contracted studies.

We have no objection to section 2(e) which states that studies be made at the level (reconnaissance, appraisal, or feasibility) to warrant Secretarial recommendations.

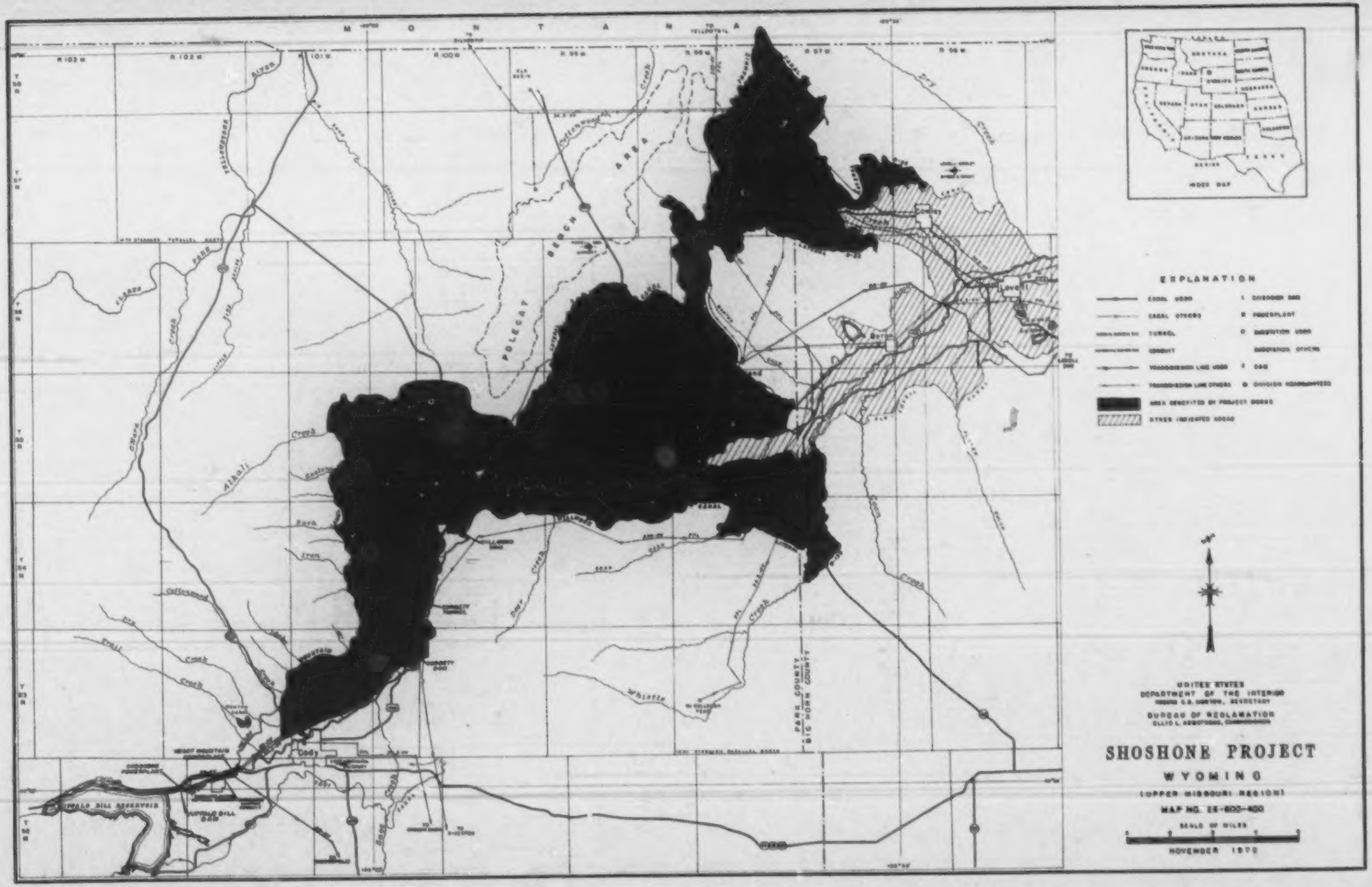
Section 3(a) would authorize the Secretary to cancel the Oahe Unit contracts and release reserved funds accumulated by the Oahe Conservancy Sub-District under the master contract. This raises several questions. Is the intent of this section to deauthorize the Oahe project and, in that light, we question whether the Secretary may unilaterally terminate the contracts. Since the reserved funds were collected from the taxpayers of the Oahe Conservancy Sub-District, consideration should be given to an equitable refund such that the money should go to the taxpayers or otherwise be expended to their benefit. This section also should specify how the repayment obligation for the approximately $40 million plus interest during construction should be discharged. We recommend it be treated as a deferred cost to be assumed by the water users of any future project that utilizes facilities already constructed after the time of Oahe Unit contract cancellation. Consideration should be given to setting a time limit for Oahe Unit contract cancellation.

We understand that the most immediate concern is with providing such benefits for the Grass Rope Unit serving the Lower Brule Indian Reservation. Some $2.6 million for initiation of construction of that project is included in the fiscal year 1982 budget for the Bureau of Indian Affairs.

Section 5 - At the present time there is no way to determine the cost of carrying out the provisions of the act. Other sections, such as 1, 2(a), 2(c), 2(d), 3(a), and 4 require clarification before the cost can be determined.

We recommend that S. 1553 be amended to reflect the issues noted above. Since our proposed amendments are lengthy, I am submitting for the Committee's consideration a marked up copy of S. 1553 with Interior's proposed amendments inserted. With the exception of Section 4, those amendments are identical to those presented to the House of Representatives on its companion bill H.R. 4347.

Mr. Chairman, that completes my statement on S. 1553. I would be happy to answer any questions the Committee might have.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TO YELLOWTAIL
Clarks Fork
Yellowstone River
Polecat Bench Area
Cottonwood Creek
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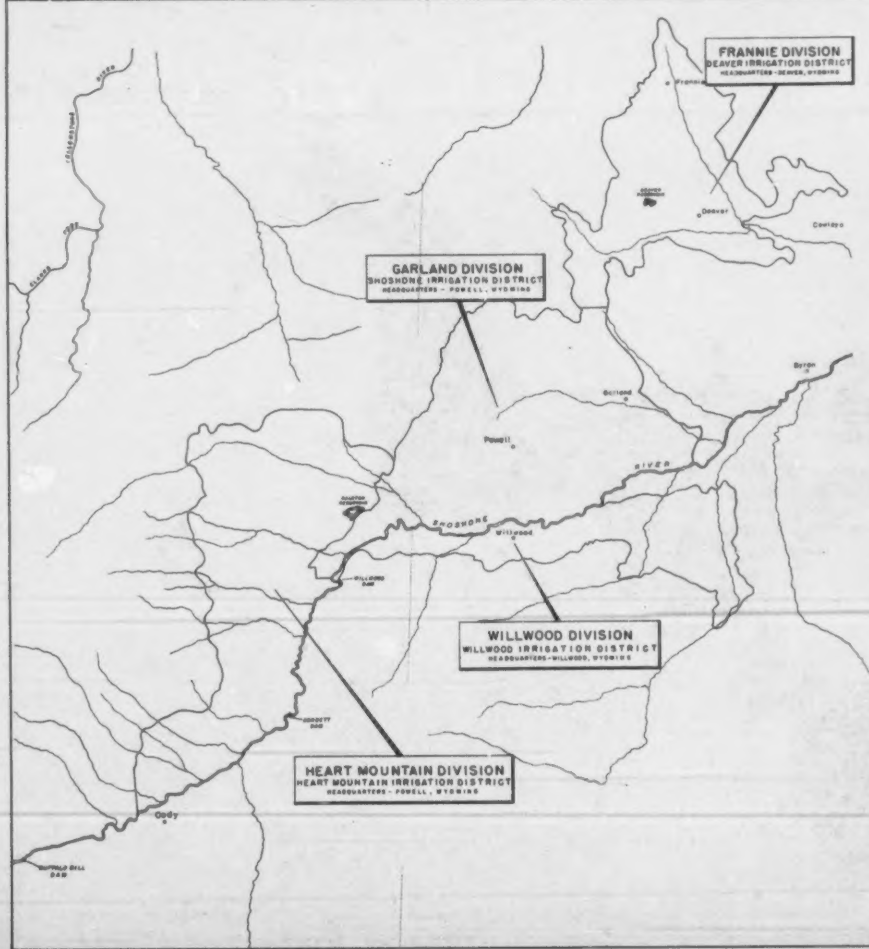
Dry Creek
Alkali Creek
Sage Creek
Cottonwood
Trail Creek
Canal
Powell
Byron
Cody
Buffalo Bill Reservoir
Buffalo Bill Dam
Heart Mountain
Whistle Creek
Park County
Big Horn County
Index Map
EXPLANATION
CANAL USBR
CANAL OTHERS
TUNNEL
CONDUIT
TRANSMISSION LINE USBR
TRANSMISSION LINE OTHERS
AREA IRRIGATED BY PROJECT WORKS
OTHER IRRIGATED AREAS
DIVERSION DAM
POWERPLANT
SUBSTATION USBR
SUBSTATION OTHERS
DAM
DIVISION HEADQUARTERS
N
UNITED STATES
DEPARTMENT OF THE INTERIOR
ROGERS C.B. MORTON, SECRETARY
BUREAU OF RECLAMATION
ELLIS L. ARMSTRONG, COMMISSIONER
SHOSHONE PROJECT
WYOMING
(UPPER MISSOURI REGION)
MAP NO. 25-600-400
SCALE OF MILES
NOVEMBER 1972


FRANNIE DIVISION
DEAVER IRRIGATION DISTRICT
HEADQUARTERS - DEAVER, WYOMING
GARLAND DIVISION
SHOSHONE IRRIGATION DISTRICT
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WILLWOOD DIVISION
WILLWOOD IRRIGATION DISTRICT
HEADQUARTERS - WILLWOOD, WYOMING
HEART MOUNTAIN DIVISION
HEART MOUNTAIN IRRIGATION DISTRICT
HEADQUARTERS - POWELL, WYOMING
YELLOWSTONE
RIVER
CLARKS
FORK
Frannie
Deaver
Cowley
Byron
Garland
Powell
Willwood
Cody
SHOSHONE
RIVER
WILLWOOD DAM
CORBETT DAM
BUFFALO BILL DAM

FACTUAL DATA ON THE SHOSHONE PROJECT

WATER SUPPLY

The water supply for Shoshone Project is obtained from surface runoff, mainly snow melt, above Buffalo Bill Reservoir. Buffalo Bill Dam, situated in a steep narrow canyon between Cedar Ridge Mountain and Rattlesnake Mountain, impounds flood waters of the Shoshone River and thereby provides regulation of stream flow for irrigation, flood control, sediment retention, power generation, recreation, and fish and wildlife propagation. Headwaters of the Shoshone River rise on the eastern slope of the Absaroka Range. The drainage area of the Shoshone River above Buffalo Bill Dam is approximately 1,500 square miles and yields an average of 610 acre-feet of water per square mile or 11.5 inches annually.

Buffalo Bill Dam is named for Colonel William F. (Buffalo Bill) Cody as is the town of Cody, Wyoming.

FEATURES OF THE PROJECT

The Shoshone Project is comprised of four divisions—Garland, Frannie, Willwood, and Heart Mountain—and has a total of 88,406 irrigable acres. Buffalo Bill Dam, completed in 1910, is the key feature of the Project. It is a constant radius arch dam, once the highest in the world. It was constructed with 78,576 cubic yards of concrete rubble, 108 feet thick at the base and 10 feet thick at the crest. Structural height of the dam is 328 feet and crest length is 200 feet.

The spillway consists of a rock weir, an unlined intake channel and a tunnel. The unlined horseshoe-shaped tunnel which was bored through granite is approximately 20 feet by 20 feet in size.

The reservoir has a total capacity of 491,380 acre-feet and an active capacity of 442,150 acre-feet at elevation 5,370.7 feet mean sea level. The reservoir has a surface area of 6,710 acres (10.5 square miles) and a length of 7 miles.

Heart Mountain Canal delivers water to the Heart Mountain Division and Heart Mountain Powerplant. Water is taken directly from Buffalo Bill Reservoir by means of Shoshone Canyon conduit, a tunnel 13,786 feet long through Cedar Mountain. The conduit ends at the powerplant and the canal begins with the Shoshone River siphon which spans the river below the tunnel outlet. Capacity of the siphon is 915 cubic feet per second.

Garland Canal supplies the Garland Division and the Frannie Division by way of the Frannie and Deaver Canals. The canal originates at Corbett Diversion Dam which is situated on the Shoshone River about 16 miles downstream from Buffalo Bill Dam. Initial capacity of the canal is 1,000 cubic feet per second.

Corbett Diversion Dam is reinforced concrete Ambursen weir with a short earth dike. It has a structural height of 12 feet and a crest length of 938 feet. The outlet works consist of the concrete-lined horseshoe-shaped tunnel 11'6" wide by 10'8" high and 17,335 feet in length.

Frannie Canal takes off from the Garland Canal near Ralston and extends to a point near Frannie. Initial capacity of the canal is 580 cubic feet per second.

Off-stream storage is provided by Ralston and Deaver Reservoirs. Ralston Reservoir (of limited capacity) is located off the Garland Canal. Deaver Reservoir is located on Lateral 114-F, and has a total capacity of 680 acre-feet and supplies water to the town of Deaver.

Willwood Diversion Dam is a concrete gravity structure. Structural height of the dam is 70 feet, hydraulic height is 41 feet and crest length is 390 feet. It diverts water to the Willwood Division for irrigation.

POWER

The power system of the Shoshone Project consists of two powerplants and attendant switchyards, transmission lines, and substations. Shoshone Powerplant, situated near the base of Buffalo Bill Dam, has a capacity of 5,600 kilowatts. Heart Mountain Powerplant, situated three miles downstream from Buffalo Bill Dam, has a capacity of 5,000 kilowatts. The system is interconnected with power systems of the Boysen and Riverton Units, North Platte and Kendrick Projects. Transmission lines consist of 113.6 miles of 69-kv and 57.1 miles of 34.5-kv lines.

RECREATION

Numerous activities that are associated with outdoor recreation are realized through the Buffalo Bill Reservoir. Situated at the eastern gateway to Yellowstone National Park, Buffalo Bill Reservoir is located on the eastern slope of the Absaroka Mountain Range and is bounded by spectacular Rattlesnake Mountain and Cedar Ridge Mountain. The Shoshone River has carved a narrow and precipitous gorge nearly 2,000 feet deep through granite. The combination of canyon scenery, mountain backdrop, and reservoir activities attracted 172,801 visitors in 1971. Buffalo Bill Dam is listed on the National Register of Historic Places.

Water-related activities constitute the basic recreation attraction. Fishing is popular in the reservoir and it totaled 50,203 angler days during 1971. Deer, elk, game birds, and waterfowl abound within the Project area. Other activities include camping, picnicking, hiking, riding, and observing points of historical interest. Existing facilities which enhance fishing, boating, and camping include public recreation facilities along the north side of the reservoir. These facilities were installed by the Wyoming Parks Commission.

IRRIGATION

Flood waters of the Shoshone River are stored in Buffalo Bill Reservoir and released as needed for irrigation of Shoshone Project land and for power production. The Garland Division of the Shoshone Project has an irrigable area of 35,863 acres while there are 14,600 irrigable acres in the Frannie Division, 11,530 acres in the Willwood Division, and 26,433 acres in the Heart Mountain Division. Canals totaling 140.8 miles and six tunnels totaling 6.8 miles are used for delivering water to project land.

Plans for future development include an additional area of about 19,200 acres on Polecat Bench which may ultimately be served by extending the Heart Mountain Canal.

SOILS

The soils of the irrigable area are divided into two broad categories: (1) residual soils underlain with shale and sandstone containing moderate to excessive amounts of soluble salts which are located in the northeastern part of the Project; and (2) modified alluvial soils underlain by gravel deposits which are predominant in the remainder of the Project.

ALTITUDE

The elevation at Powell on the Garland Division is 4,380 feet mean sea level. At Cody near the Heart Mountain Division the elevation is 4,984 feet.

CLIMATIC DATA

The average annual precipitation at Powell and Cody is 5.61 and 9.38 inches, respectively. Of these amounts, 0.46 inch at Powell and 1.55 inches at Cody are snow. The mean annual temperature at the two stations is 45.8°F. and 46.1°F. while the range is from a low of -46°F. to a high of 106°F. in 1936 and 1961, respectively. The middle of May is the average latest date of killing frost in the spring while the average earliest date of killing frost in the fall occurs in the latter part of September. The average length of the growing season is 147 days.

Annual consumptive use of irrigation water in the driest years is approximately 2.5 acre-feet per acre. The historical diversion requirement to meet these demands for water has been about 7.6 acre-feet per acre annually for full irrigation supply.

ECONOMY OF THE PROJECT

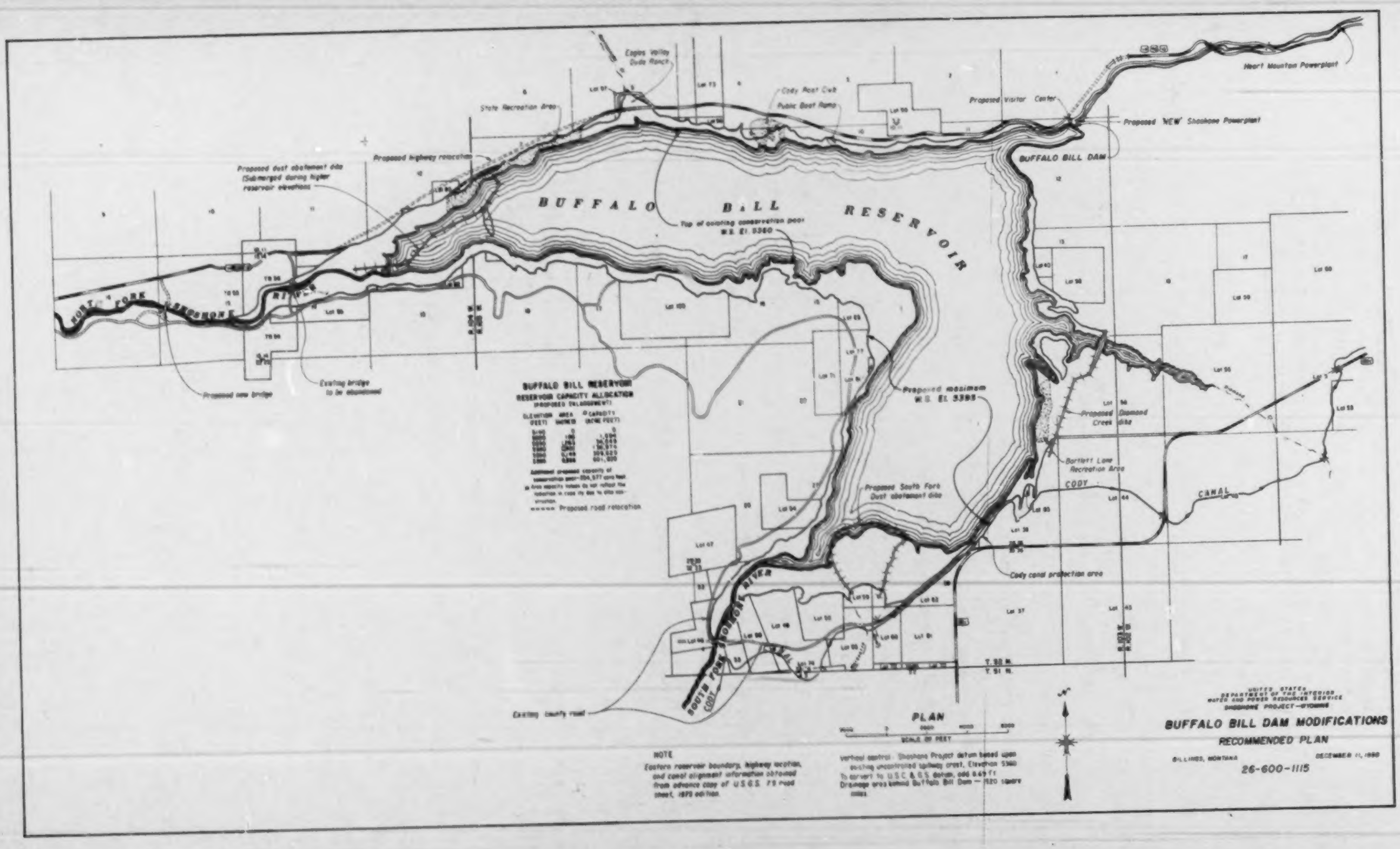
Beans, peas, oats, barley, wheat, sugar beets, corn for silage, alfalfa, other forage, and seeds are the principal crops grown under irrigation on the Project. Farm flocks of sheep and small herds of cattle are raised, utilizing grain, hay, pasture, and by-products of cash crops. Some lamb and steer feeding is done.

Agricultural products from the Project area are widely distributed. Dry edible beans are shipped out in large quantities after being processed locally. Sugar beets are processed in Lovell, Wyoming. Most of the seed crops are grown under contract for midwestern and western markets. Sheep are marketed mostly through Denver, Colorado; some are shipped to the West Coast and to markets in the Mississippi Valley. Most cattle are marketed in Billings, Montana, but some are shipped to markets in Omaha, Nebraska, and Sioux City, Iowa.

ADDITIONAL INFORMATION

Address inquiries to:

Bureau of Reclamation, P.O. Box 2553, Billings, Montana 59103


Heart Mountain Powerplant
Proposed Visitor Center
Proposed 'NEW' Shoshone Powerplant
BUFFALO BILL DAM
Eagles Valley Dude Ranch
Cody Boat Club
Public Boat Ramp
State Recreation Area
Proposed highway relocation
Proposed dust abatement dike (Submerged during higher reservoir elevations
BUFFALO BILL RESERVOIR
Top of existing conservation pool W.S. El. 5360
NORTH FORK SHOSHONE RIVER
Proposed new bridge
Existing bridge to be abandoned
Proposed maximum W.S. El. 5393
Proposed Diamond Creek dike
Bartlett Lane Recreation Area
CODY CANAL
Proposed South Fork Dust abatement dike
Cody canal protection area
SOUTH FORK SHOSHONE RIVER
CODY
Existing county road
T. 53 N.
T. 51 N.
BUFFALO BILL RESERVOIR
RESERVOIR CAPACITY ALLOCATION
(PROPOSED ENLARGEMENT)
ELEVATION (FEET)
AREA (ACRES)
CAPACITY (ACRE FEET)
Proposed road relocation
PLAN
SCALE OF FEET

NOTE
Eastern reservoir boundary, highway location, and canal alignment information obtained from advance copy of U.S.G.S. 7.5 quad sheet, 1973 edition.

Vertical control: Shoshone Project datum based upon existing uncontrolled spillway crest, Elevation 5360.
To convert to U.S.C.&G.S. datum, add 6.69 ft.
Drainage area behind Buffalo Bill Dam — 1520 square miles.

UNITED STATES
DEPARTMENT OF THE INTERIOR
WATER AND POWER RESOURCES SERVICE
SHOSHONE PROJECT—WYOMING

BUFFALO BILL DAM MODIFICATIONS

RECOMMENDED PLAN

BILLINGS, MONTANA DECEMBER 11, 1980

26-600-1115

With amendments proposed by the Department of the Interior

97TH CONGRESS
1ST SESSION

S. 1553

To authorize the Secretary of the Interior to proceed with development of the WEB pipeline, to provide for the study of South Dakota water projects to be developed in lieu of the Oahe and Pollock-Herreid irrigation projects, and to make available Missouri basin pumping power to projects authorized by the Flood Control Act of 1944 to receive such power.

IN THE SENATE OF THE UNITED STATES

JULY 30 (legislative day, JULY 8), 1981

Mr. ABDNOR (for himself and Mr. PRESSLER) introduced the following bill; which was read twice and referred to the Committee on Energy and Natural Resources

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A BILL

To authorize the Secretary of the Interior to proceed with development of the WEB pipeline, to provide for the study of South Dakota water projects to be developed in lieu of the Oahe and Pollock-Herreid irrigation projects, and to make available Missouri basin pumping power to the Grass Rope Unit, and other units of the Pick-Sloan Missouri Basin Program. *

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That (a) the WEB rural water development project, authorized by section 9 of Public Law 96-355, is reauthorized subject to the following changes in such section:

(1) the proviso clauses contained in subsection (b) shall not apply to the WEB Rural Water Development Project;

(2) the first sentence of subsection (d) is stricken; and

(3) the first sentence of subsection (e) is stricken and the following sentence is inserted in lieu thereof: "The Secretary of Interior shall use funds appropriated under this Act to provide financial assistance to plan and develop the WEB Rural Water Development Project under the terms and conditions of the Consolidated Farm and Rural Development Act and the rules and regulations promulgated by the Department of Agriculture under that Act, except to the extent such Act or rules or regulations promulgated thereunder are inconsistent with the provisions of this section.".

(b) The Secretary of the Interior (hereinafter referred to as the "Secretary") is directed to proceed with the development of the WEB rural water development project, consistent with the terms of section 9(e) of Public Law 96-355, as amended by Section1(a)(3) of this Act, and to make available for immediate obligation any funds appropriated for such project for fiscal year 1981.~~, except that such funds shall be made available directly to the WEB Association and shall not be transferred to the Department of Agriculture.~~

SEC. 2. (a) The Secretary is authorized, in cooperation with the State of South Dakota, to conduct a study pursuant to this Act which shall include consideration of—

(1) alternate uses of facilities constructed for use in conjunction with the Oahe unit, initial stage, James division, Pick-Sloan Missouri River basin program, South Dakota;

(2) future uses in South Dakota of water delivered by the Garrison unit, Pick-Sloan Missouri River basin program, North Dakota;

(3) a modified plan of development for the Pollock-Herreid unit, South Dakota pumping division, Pick-Sloan Missouri River basin program, South

Dakota, including [illegible] ages[and] .

[~~(4) the potential for development of any other water project or projects proposed by the Governor of the State of South Dakota, in accordance with the policies and priorities of the State, which the Secretary determines may qualify for Federal construction funding under the terms of this section.~~] *

(b) In formulating his recommendations to Congress the Secretary shall take into account the land inundated in South Dakota under the Pick-Sloan Missouri basin program and the irrigation development authorized for South Dakota by the Flood Control Act of 1944. [~~In determining the feasibility of projects proposed by the State under this section the Secretary shall~~ may ~~use criteria no less favorable than those under which the Oahe unit, initial stage, was authorized~~. ~~, except that the Secretary may use other criteria with the consent of the State.~~ *

(c) The Secretary shall report to Congress the findings of the studies, along with his recommendations for disposition of the Oahe unit, initial stage, for development of the Pollock-Herreid unit, and for Federal involvement in other projects proposed by the State.

(d) The Secretary may contract with the State to carry out the studies authorized by this section.

(e) The studies performed and the reports made under this section shall be of reconnaissance, appraisal, or feasibility grade as is appropriate to determine whether further action on the development of the Secretary's recommendations is warranted.

SEC. 3. (a) The Secretary is authorized to cancel the master contract and participating and security contracts for the Oahe unit, initial stage, [~~and to release any and all funds~~ * ~~accumulated by the Oahe conservancy subdistrict under the master contract~~]: Provided, however, That any such actions shall be done [~~after~~] with the agreement of the * OAHE conservancy subdistrict and the Spink and West Brown irrigation districts; and provided further, That any and ; all funds accumulated by the Oahe Conservancy Subdistrict under the Master Contract shall be refunded to or otherwise expended for the benefit of the taxpayers of the subdistrict; and That any repayment obligation existing at the time of cancellation of the Master and Security Contracts shall thereafter be treated as a deferred cost of the Pick-Sloan Missouri Basin Program to be assumed by the beneficiaries of any future project which utilizes the Oahe Unit facilities for which the repayment obligation was incurred.

(b) Those features of the authorized plan of de for the Oahe unit, initial stage which were designed for and could be used only to deliver irrigation water to the Spink and West Brown irrigation districts namely: Faulkton, Cresbard, West Main, Redfield, James, and East Main Canals; Cresbard and Byron Dams and Reservoirs; James and Byron Pumping Plants; and associated features; shall not be constructed by the Secretary, but nothing in this Act shall be deemed to limit the authority of the Secretary to recommend development of other features, based upon the study authorized by section 2(a)(1) of this Act. *

Section 4. The Secretary of the Interior, in cooperation with the Department of Energy, is authorized to make available the Missouri River Basin program pumping power to new irrigation projects constructed by Indian tribes or by public entities organized under State law which have been authorized by the Flood Control Act of 1944 to receive such power. Such power shall be made available to the Grass Rope Unit, Pick-Sloan Missouri Basin Program. In recognition of the legislative intent of the Pick-Sloan Missouri River Basin Program to provide project power to financially sound irrigation development, such power may also be made available at the Secretary's discretion for other such Federal or cooperative Federal/non-Federal irrigation projects, if requested by the Governor or an Indian tribe, provided that the Secretary determines the project to be economically and financially feasible and in compliance with applicable environmental laws, and submits such proposals to Congress subject to disapproval by joint resolution within 90 days. *

~~the request of the State of South Dakota or an Indian tribe, regardless of the source of construction funding for [illegible] such irrigation projects~~ *

SEC. 5. ~~There are authorized to be appropriated $ to carry out the provisions of this Act~~ Effective October 1, 1981, there are authorized to be appropriated such funds as may be necessary to carry out the provisions of this Act.

Statement of Robert N. Broadbent
Comissioner of the Bureau of Reclamation
Witness for the Department of the Interior before the Subcommittee
on Water and Power, Senate Committee on Energy and Natural Resources
February 12, 1982

Mr. Chairman, members of the subcommittee. I am here to present the Department's views on S. 1628. The bill, if enacted, would broaden the Emergency Fund Act of June 26, 1948, Public Law 80-790, to permit the use of emergency funds for the repair of project facilities serving municipal and industrial (M&I) purposes on projects governed by the Federal reclamation laws, where title is vested in the United States. Emergency funds would be used only when such use would be needed to restore service or to prevent loss of service or further damage to project facilities.

We recommend enactment of S. 1628.

The Emergency Fund Act currently authorizes the appropriation of an emergency fund for the Bureau of Reclamation to ensure the continuous operation of its irrigation and power systems on projects governed by the Federal reclamation laws (Act of June 17, 1902, 32 Stat. 388, and Acts amendatory thereof or supplementary thereto). Funds are made available to the Emergency Fund in annual appropriation acts. As presently authorized, the Emergency Fund authority can be used only for the emergency protection and repair of irrigation and power systems being operated and maintained by the United States and for those systems for which title is vested in the United States but which are being operated and maintained by other entities pursuant to provisions of an operating contract.

In 1980, the Bureau of Reclamation provided M&I service to 178 entities, serving a population of more than 19.0 million. A total of 2.0 million acre-feet of M&I water was delivered in 1980. Funds for the repair or replacement of the M&I systems are not available under the present terms of the Emergency Fund Act. Although we have received only a few unofficial inquiries about the availability of funds pursuant to the Emergency Fund Act for the emergency repair of M&I water systems, we expect the frequency and number of such requests to increase in the future because we are delivering more M&I water each year and the existing systems are getting older.

Under the Emergency Fund Act, funds are made available to meet unusual or emergency conditions, such as canal bank failures, generator failures, damage to transmission lines; or other physical failures or damage, acts of God such as fires, floods, drought or epidemics, strikes, freight embargoes, or conditions causing or threatening to cause interruption of water or power service.

The Emergency Fund appropriation is used only to the extent necessary to restore water or power service or to ensure the continuation of service if conditions threaten interruption of such service. The Fund is used if no other federally appropriated funds are available and only until other Federal funds, if needed, can be obtained in a timely manner through the normal appropriation process.

The Emergency Fund Act authority is not used as a means to avoid requesting operation and maintenance or rehabilitation and betterment funds sufficiently in advance to keep project works in a safe operating condition. On projects turned over to water users for operation and maintenance, only those emergencies which cannot be met by the water users out of regular or reserve operation and maintenance funds are considered within the scope of the Emergency Fund Act. Expenditures are reimbursable or returnable depending upon the applicable law or contractual arrangements on reimbursability for the purpose for which the expenditures are made. The proposed amendment makes no change in existing law on reimbursability.

If S. 1628 were enacted, it would authorize the use of emergency funds for the emergency repair of our M&I systems as well as our irrigation and power systems.

I would be pleased to answer any questions you may have.

Thank You.

Senator MURKOWSKI. Thank you very much, Mr. Commissioner. We appreciate your excellent and very thorough testimony.

Commissioner Broadbent, I have wondered about the current costs associated with the WEB project, and I wonder if you have available for the record the current cost estimate at this time?

Commissioner BROADBENT. I will be glad to submit them to the record—something in the neighborhood I think of $70 million.

[Subsequent to the hearing Mr. Broadbent supplied the following:]

WEB PIPELINE

Question: Commissioner Broadbent, I have wondered about the current costs associated with the WEB project, and I wonder if you have available for the record the current cost estimate?

Answer: As estimated by Benjamin Kastl, Inc., consultants for the WEB Pipeline Association, and adjusted by the Bureau of Reclamation to provide for additional overhead expenses, the current estimated cost of the WEB Pipeline project is $78 million, based on January 1982 price levels.

Senator MURKOWSKI. Seventy million would be for which?

Commissioner BROADBENT. The WEB pipeline, but that is just a guess. We would like to submit it for the record.

Senator MURKOWSKI. What would your guess be for Belle Fourche?

Commissioner BROADBENT. Forty-two million.

Senator MURKOWSKI. In your statement then, on the WEB, Senate bill 1553, and that of opposition of the 933 bill, I am curious. There seems to be a lack of consistency in the sense that you support the WEB project, and it is my understanding that both of these projects have a substantial grant application vis-a-vis a user fee payback scenario.

Is it about 70/30 or thereabouts for each project?

Commissioner BROADBENT. Yes.

Senator MURKOWSKI. What was that?

Commissioner BROADBENT. Yes, sir, about 70/30.

Senator MURKOWSKI. So philosophically the application is the same under both projects from the standpoint of that portion that would be granted. I am just wondering if you can elaborate on the record why there is that inconsistency, the lack of support for one and support for the other, in view of the fact that the same basic application applies to each project as it is proposed?

Commissioner **Broadbent**. You are correct, but I think there is definitely an inconsistency. I think this administration is trying to say that we are committed to repayment of as much of the projects as we can get for the building of the projects.

However, as is the case in many things, there are always exceptions. I think probably one of the exceptions that we are looking at is the WEB pipeline. There were different circumstances when that was originally authorized several years ago. There was a deferral last year of $1.9 million and an indication that when we could, we wanted to go ahead.

The Secretary himself testified on this bill in the House or under House discussion, and said that he was committed to WEB. We are committed to the construction of WEB. I think that is a commitment that has been indicated by the Congress and by this administration. We recognize that there is a difference in Belle Fourche because Belle Fourche at the same time has some of the same problems. It is a rehabilitation and betterment project that was built 70 or 80 years ago. It is in bad need of repair. There is a loss of valuable water because of it.

We recognize those things. At the same time, because of the fiscal restraints on this administration, we didn't think that we were in a position to recommend approval of this bill.

Senator **Murkowski**. I think that clarifies and provides the basis for the acknowledged inconsistency.

Under the terms of Senate bill 1553, would the Bureau be able to utilize the $1.9 million which has previously been appropriated for the WEB project?

Commissioner **Broadbent**. Mr. Chairman, that question has come up and is being discussed with members of the South Dakota delegation, and their staff, and with people in the Department.

We have a suggestion from our solicitor that indicates that it may be appropriate for a further amendment to that bill. This has not been cleared with the administration yet, but if you would like we would submit it for the record.

Senator **Murkowski**. I do appreciate that. You submit it—the amendment—for the record, and that is available now, is that correct?

Commissioner **Broadbent**. Yes, sir.

Senator **Murkowski**. And the opinion is that it can be utilized?

Commissioner **Broadbent**. It is unclear whether we could use the $1.9 million.

Senator **Murkowski**. What is the opinion generally?

Commissioner **Broadbent**. It is suggested that there be an amendment to clarify it, but the opinion in general says that the delegation feels it would best be taken care of by amendment to this bill, and if there is a minor amendment to it, then the $1.9 million would be available. It may be available anyway.

Senator **Murkowski**. But the opinion doesn't address whether it may be available anyway?

Commissioner **Broadbent**. I think that——

Senator **Murkowski**. It sounds like the counsel has covered himself pretty well.

Commissioner **Broadbent**. I would say that we would be hopeful that Congress might take us out of that responsibility but if you need an opinion on exactly what that bill does, we would be happy to furnish that to you, too.

[Subsequent to the hearing Mr. Broadbent supplied the following:]

WEB PIPELINE PROJECT

Question: You will submit it (the amendment) for the record...is that correct?

Answer: Yes, sir. Relative to the availability of the $1.9 million for the WEB Pipeline project, we suggest that Sec. 1(b) of S. 1533 be amended to read as follows:

> Sec. 1(b) The Secretary of the Interior (hereinafter referred to as the "Secretary") is directed to proceed with the development of the WEB rural water development project, consistent with the terms of section 9(e) of Public Law 96-355, and the Secretary of the Treasury is directed to make available to the Secretary for immediate obligation, notwithstanding § 306 of Public Law 96-514, and notwithstanding the conditions contained in Public Law 97-12 regarding the availability for obligation of the $1.9 million appropriated under Public Law 96-514, any funds appropriated for such project in fiscal year 1981....

Senator **Murkowski**. I think we have concluded pretty well for the record the discussion on those two projects. We would continue on Senate bill 1628, and I welcome your presentation on that.

Commissioner **Broadbent**. Mr. Chairman, this bill is an administration-supported bill, and it was proposed by the administration to you when it was introduced. It is a bill which would broaden the Emergency Fund Act of 1948 to permit the use of emergency funds for the repair of project facilities serving municipal and industrial purposes.

At the present time, we have the right to use emergency funds for irrigation and power purposes, but not for municipal and industrial purposes.

The proposed Emergency Fund Act amendment in general—it is a very simple bill, and it just expands our authority to use these emergency funds. We would be happy to indicate to you where the emergency funds have been used previously, and the amounts of money that have been used for emergency funds which may be of interest to you in looking at this bill.

I think that about $3½ million worth of emergency fund loans has been executed from 1973 to 1982, all for irrigation districts, for irrigation benefits, and for power benefits. This has been a good program because it has protected the facilities that are being repaid to the Government by the user, and if the facilities fall in disrepair, that strains the ability of the irrigation district or the power people to pay for them and by using these emergency funds to maintain or restore service when an emergency has occurred, we can have a good investment and would urge its expansion.

That concludes my testimony, Senator.

Senator MURKOWSKI. Commissioner, has the Bureau considered the need for extending the authority of the Emergency Fund Act to include facilities constructed pursuant to the Distribution Systems Act or the Small Projects Act?

Commissioner BROADBENT. I would like to submit that for the record, Mr. Chairman, if I might. I am not sure.

[Subsequent to the hearing Mr. Broadbent supplied the following:]

EMERGENCY FUND

QUESTION: Commissioner, has the Bureau considered the need for extending the authority of the Emergency Fund Act to include facilities constructed pursuant to the Distribution of Systems Act or the Small Projects Act?

ANSWER: Yes, when we first considered the need for an Emergency Fund Act amendment, we considered including facilities constructed pursuant to the Distribution System Loans Act and facilities constructed pursuant to the Small Reclamation Projects Act. Over the years, we had received unofficial inquiries about the eligibility of facilities constructed pursuant to the latter two Acts. We determined that it would be inappropriate to include them in our proposed amendment because the United States does not retain title to facilities constructed pursuant to either Act. The United States retains title to our irrigation and power systems and to the municipal and industrial facilities that would be eligible pursuant to the proposed amendment.

Senator MURKOWSKI. The record will so note. I don't think there is any further questions on this, Mr. Commissioner. We will look forward to receiving your response to that for the record, and we would excuse you and thank you for your excellent testimony, and wish you a very good day. Thank you.

Commissioner BROADBENT. Mr. Chairman, thank you for the opportunity to appear.

Senator MURKOWSKI. Our next witness before the committee will be Mr. Warren Neufeld, secretary, South Dakota Department of Water and Natural Resources, Pierre, S. Dak.

Mr. NEUFELD. Mr. Chairman, thank you for the opportunity to be here today.

Senator **Murkowski**. I recall having an opportunity to meet you on that warm day, and we look forward to your testimony.

Mr. **Neufeld**. Well, I won't be as rough on you today as we were in Pierre and test your endurance, Mr. Chairman.

STATEMENT OF WARREN NEUFELD, SECRETARY, SOUTH DAKOTA DEPARTMENT OF WATER AND NATURAL RESOURCES

Mr. **Neufeld**. Mr. Chairman, I have no prepared remarks for myself. I stand here, sit here on behalf of the Governor of South Dakota, Governor Janklow. I have submitted to staff already the resolutions passed by the South Dakota Legislature, two of them, both in support of 933 and 1553.

Senator **Murkowski**. The record will remain open.

Mr. **Neufeld**.I have also submitted a letter from Governor Janklow to the chairman. I was not present when the resolutions passed, Mr. Chairman, but I am told that they passed the legislature without a single dissenting vote.

With respect to the Belle Fourche project, Mr. Chairman, I have two comments. I understand that the project sponsors are considering utilization of any water, the excess water that may be generated by the rehabilitation betterment, and perhaps entering into a contract with nonagricultural users and energy users to help repay some of the project costs, and that amendment has been proposed and submitted to Mr. Brown. At least he is aware of it.

We support that kind of an amendment on two conditions. Basically we feel that the river water in the Belle Fourche River is under compact between the States of Wyoming and South Dakota, and that any sale that might be made should in fact go back into rehabilitating the project.

In addition, we feel it would require the consent of the State of South Dakota under its rights and allocations on the Belle Fourche River contract, and we would like to see a proposed amendment reflect that. I have some proposed wording that we will support that would allow us to support the proposed amendment. We would like to see our rights protected in that regard.

The water is a birthright of all the citizens of the State of South Dakota.

The other point on the Belle Fourche project, it deals with the administration's comment. To tell you the truth, Mr. Chairman, I am a bit taken aback by the fact of the grounds that the administration has taken for opposing the rehabilitation betterment of the Belle Fourche project.

Senator **Murkowski**. The lack of consistency that was acknowledged?

Mr. **Neufeld**. Not that so much as the fact that they don't like to see the power revenues used to repay the costs of the project. The Pick-Sloan plan was originated as a unified concept of flood control, navigation, power development, and irrigation for the entire Missouri River Basin, and the revenues, it was originally decided that the revenues from power would pay for the irrigation in the upper basin. Secretary Watt has reaffirmed his belief in the moral commitment that the Federal Government owes South Dakota under the Pick-Sloan plan, and now the administration is testifying that one of the basic concepts of the Pick-Sloan plan is not palatable with them, and I am at a bit of a loss.

Another thing that concerns me regarding the administration's testimony today was, and I am reminded of it by Governor Herschler's presentation, South Dakota is a very poor State. Our per capita income is 50th in the Nation. However, some of our people utilize power that burns coal, mainly in Wyoming, and we help Wyoming's severance tax, and we are happy to do that. We are very happy to do that. We think Wyoming ought to be compensated for the sacrifices it is making to provide the rest of the Nation with energy.

South Dakota, however, also made some sacrifices a long time ago, and I need not go through the fact that we had 536,000 acres under water. We did that to provide benefits, over a $1½ billion flood control benefits downstream, and we feel that some of those people who are enjoying those benefits, the power users, ought to be in a position to and ought to be happy to pay for the fact that South Dakota needs irrigation development, and the fact that South Dakota is poor because in large part because of Federal development that has taken place in our State in the past. Just as we are happy to pay Wyoming severance tax, we feel that the rest of the power users in the basin ought to be in a similar position to help compensate us for the damages we have suffered under the Pick-Sloan plan.

With respect to 1553, Mr. Chairman, we have reviewed the proposed amendments that were submitted to the House on the companion bill 4347, and we offer full support of that, and we feel that the bill will go a long way in putting the old controversy of the Oahe project behind us and allow us to move forward with substantial water development in the State of South Dakota.

I have no further comments, and I will entertain any questions that you have.

[Material submitted by Mr. Neufeld follows:]

STATE OF SOUTH DAKOTA
EXECUTIVE OFFICE

WILLIAM J. JANKLOW
GOVERNOR

February 11, 1982

The Honorable Frank Murkowski
Chairman, Senate Subcommittee on Water and Power
Committee on Energy and Natural Resources
United States Senate
Washington, D.C.

Re: Position of the State of South Dakota on S. 1553 and S. 933.

Dear Senator Murkowski:

Mr. Chairman and members of the Committee, I thank you for providing the State of South Dakota another opportunity to address this legislation which is so critical to future economic development in South Dakota. The policy of the present Administration concerning water development seems to be evolving into one in which the states must determine their priorities and demonstrate their willingness to share the financial burden. I support that policy and will summarize the action that has been taken in South Dakota to meet the Administration's challenge and discuss its relationship to S. 1553.

For the last two years the South Dakota Board of Water and Natural Resources and the Department of Water and Natural Resources have been working closely with special water districts, project sponsors and other interested parties on a new water development planning process. The major impetus of this process has been to establish the statewide priorities for water development based on the available natural resources, need, economic benefits, project feasibility, readiness, and local interest. The Board of Water and Natural Resources and the Conservancy Subdistricts held public meetings throughout the State in 1980 and 1981 providing an opportunity for public comment. The Board of Water and Natural Resources made recommendations based on the available project information and public input to me and the South Dakota Legislature during the 1981 legislative session. The Legislature acted on the Board's recommendations and passed legislation authorizing the recommended projects as the State Water Resources Management System.

The South Dakota Legislature during the 1981 legislative session established a summer study committee to examine funding alternatives and evaluate the state water planning process. Several funding proposals were considered; however, because of the current economic situation in South Dakota it was determined that any action taken in 1982 to shift state funds to water development would be limited. However, the full Legislature in the 1982

Session is working toward providing a substantial State financial commitment to water project development. In the near future, it is our goal to allocate further funds, such as the money collected under the State's precious minerals tax to the water facilities construction fund as well as any water user fees that may be enacted by the 1982 Legislature.

One significant opportunity for the state that has occurred in recent months is the agreement reached between Energy Transportation Systems, Incorporated (ETSI) and the State of South Dakota which would provide Missouri River water to ETSI for the purpose of transporting coal slurry. ETSI had planned to withdraw a large volume of ground water for its coal slurry pipelines from the Madison aquifer which lies under western South Dakota. Through our agreement, not only were we able to protect an aquifer important to western South Dakota from depletion, but we also secured a means to fund future water development projects. The State could receive approximately 1.4 billion dollars over the next 50 years through its agreement with ETSI. It is our intention at present to devote those funds to water development within South Dakota. We do not, however, forsee that this will be our only funding source, and we will continue to pursue other funding alternatives as they materialize. The state is also encouraging special water districts to use their taxing power to leverage additional local money for water development.

The State of South Dakota has established its water development priorities and is making every effort to provide the means for funding water development. South Dakota has answered the Reagan Administration's challenge to prepare itself for federally assisted water development, and S. 1553 is the vehicle for helping South Dakota develop its water resources.

In Pierre, South Dakota, on September 12, 1981, I testified on S. 1553 before this Committee. At that time, you were provided detailed information on the need for water development in South Dakota. I will not here reiterate all the information given on that day, but I take this opportunity to refresh your memory on the problems facing South Dakota.

South Dakota's economy is more dependent on agriculture than any other state. Although South Dakota is proud of its agricultural heritage, our unique dependence on agriculture presents us with our greatest challenge. Periodic droughts seriously affect major portions of this State and cause a substantial decrease in net farm income, a decrease in per capita income, and a resulting need for federal disaster assistance. This problem is exacerbated because of the long-term effects of livestock herd liquidation. The effects of drought are not temporary, but linger on for several years as farms rebuild their operations and livestock numbers to pre-drought levels.

My staff in the Department of Water and Natural Resources and in the Department of Agriculture have computed that 2.14 million irrigated acres are necessary to sustain cattle, hog and sheep numbers in South Dakota at 1979 levels during a prolonged drought occurence. Presently, there are only approximately 750,000 acres under irrigation in South Dakota, none of which [illegible] Frank Murkowski

[illegible] 1982

[illegible] developed under the Federal Pick-Sloan Plan established under the [illegible] Act of 1944.

[illegible] Plan is actually a combination of two plans which were [illegible] separately to alleviate problems in the Missouri River Basin. The [illegible] Engineers Plan (Pick) was designed for flood control and navigation [illegible] basin states. The Bureau of Reclamation Plan (Sloan) was [illegible] provide water for irrigation and other essential uses in the [illegible] states. Since neither plan could obtain sufficient [illegible] support, the two plans were combined and later enacted into [illegible]. The flood control structures constructed in South Dakota have [illegible] significant benefits to the states downstream and to the [illegible] economy. It was anticipated that the features of the Sloan Plan [illegible] in the Flood Control Act of 1944 would remedy the problems that [illegible] Dakota during the first half of this century. It is a sad [illegible] for South Dakotans, however, that those problems still exist [illegible] Subcommittee's action on S. 1553 will be a major step in [illegible] the benefits promised to South Dakota for its support of the [illegible] compromise that found expression in the Flood Control Act of [illegible]

[illegible] the September 12 hearing in Pierre, the Reagan Administration, the [illegible] Congressional delegation, the State of South Dakota and the [illegible] Conservancy subdistricts formulated an agreement within the [illegible] framework of the legislation that satisfies the positions of all [illegible]. Many of the suggestions that we included in that agreement are [illegible] into the amendments introduced today on S. 1553 by Senator [illegible]

[illegible] make several concessions in some sections of the legislation. In [illegible] 2.(b) language was deleted to allow projects proposed by the State to be evaluated under criteria no less favorable than those under which the Oahe unit was evaluated. In section 4 we have agreed to several restrictions concerning the availability of Missouri River Basin program pumping power. It is our belief that even with the additional restrictive language proposed as amendments to S. 1553, water development will move forward in South Dakota. The State of South Dakota fully supports this legislation and as part of my testimony, I submit to you a concurrent resolution passed by the South Dakota Legislature on February 10, 1982, endorsing S. 1553 and encouraging the full support of its passage by Congress.

The citizens of South Dakota have waited patiently for nearly forty years for water development through the Pick-Sloan Plan. South Dakota has proven its readiness and desire for water development and is requesting that you take positive action on this legislation. This action will be proof to South Dakota and the Upper Missouri Basin states that we have not been forgotten and that past commitments will be honored.

The Belle Fourche Irrigation Project has served the western part of South Dakota for nearly eighty years. Now its capability to continue operation in the future is questionable. On September 11, 1981, Warren R. Neufeld, Secretary of the South Dakota Department of Water and Natural Resources, testified before this committee in Newell, South Dakota, on S. 933, the Belle Fourche rehabilitation bill currently before this committee. I would like to take this opportunity to review the reasons why the Belle Fourche Irrigation Project is in need of rehabilitation and the importance of the project to South Dakota.

The Belle Fourche Irrigation Project was one of the first irrigation projects constructed under the federal reclamation program. Following the passage of the Reclamation Act of 1902, an investigation of the project area was made and authorization was received in 1904 at an estimated cost of about $2,100,000. Although the project has very admirably served the western part of the state, the materials and equipment used to build the dam are obsolete by today's standards; for example, unreinforced concrete not resistant to freeze-thaw, wooden flumes, unlined canals and hand operated gates were used. Many of the structures and facilities have served their expected useful life and are now in need of renovation or replacement. These obsolete facilities have caused the operation and maintenance costs of the project to increase each year.

There are certainly many sound engineering reasons justifying the rehabilitation and modernization of the Belle Fourche project. I am more concerned, however, with preserving the economic oasis for farming and business made possible by the project. Without the project, most of the project land would revert back to dry pasture and hay, and there is no alternative feed source to support the cattle and hogs presently fed in Butte County. The importance of this relationship is perhaps best illustrated by the fact that when South Dakota experienced drought from 1974 to 1976, cattle numbers decreased dramatically in all regions of the State except in Butte County where the Belle Fourche project is located.

The Belle Fourche Irrigation District has requested that S. 933 be amended to authorize the Secretary to amend contracts between the United States and the Belle Fourche Irrigation District to allow for the sale of project water for use by a non-Federal interest. The State of South Dakota can support this amendment as a means of assisting the Belle Fourche project beneficiaries obtain the improvements in the project that they so desperately need. However, as the custodian of the State's water resources for the benefit of all South Dakotans, the State of South Dakota must insist that the following safeguards be placed on any such transaction for the sale of water. First, no such transaction for the sale of water should be authorized if it would violate applicable state laws. Second, any transaction must be subject to the consent of, and conditions imposed by, the State of South Dakota. Third, any such transaction must respect the terms of apportionment and rights granted to the State of South Dakota under the Belle Fourche River Compact between the States of Wyoming and South Dakota.

The State of South Dakota fully supports the passage of S. 933 authorizing the rehabilitation of the Belle Fourche Project because this proposal would maintain an existing water development project that is very beneficial to the State of South Dakota. This project provides for its region what we have been requesting for many other areas of the State. We cannot afford to lose the products that are grown on this project especially in this region of the State. No other viable alternative exists. The South Dakota Legislature, recognizing this problem, passed a concurrent resolution on February 8, 1982, endorsing S. 933 and encouraging the full support of its passage by Congress. I join with them in asking you to report to the full Senate committee and the Senate and recommend that they reauthorize and fund this project as proposed in the amended version of S. 933.

Sincerely,

Bill Janklow

HOUSE CONCURRENT RESOLUTION NO. 1027

A CONCURRENT RESOLUTION, Endorsing H.R. 4347/S. 1553 for the development of the WEB Pipeline, the study of South Dakota water development projects and availability of Missouri River Basin pumping power to projects authorized by the Flood Control Act of 1944.

WHEREAS, the development of the WEB Pipeline is essential for the social and economic preservation of fifty-one communities and rural families in nine counties in north central South Dakota; and

WHEREAS, water development in South Dakota is necessary for stabilizing and improving the agricultural and industrial economy of the state; and

WHEREAS, the availability of Missouri River basin pumping power rates will assist the Grass Rope Project and other approved irrigation projects to operate in a financially sound manner; and

WHEREAS, H.R. 4347/S. 1553 has been endorsed by all four members of South Dakota's Congressional Delegation and the Governor of South Dakota; and

WHEREAS, the Reagan Administration has indicated its support for H.R. 4347/S. 1553; and

WHEREAS, H.R. 4347/S. 1553 reaffirms the 1944 federal commitment to South Dakota of providing financial assistance for future water development from the Missouri River mainstem reservoirs:

NOW, THEREFORE, BE IT RESOLVED, by the House of Representatives of the Fifty-seventh Legislature of the state of South Dakota, the Senate concurring therein, that the South Dakota Legislature endorses H.R. 4347/S. 1553 and encourages full support of its passage by the Ninety-seventh Congress of the United States.

Adopted by the House of Representatives, February 10, 1982
Concurred in by the Senate, February 10, 1982

Walter D Miller
Walter D. Miller
Speaker of the House

Paul Inman
Paul Inman
Chief Clerk of the House

Lowell Hansen
Lowell C. Hansen II
President of the Senate

Joyce Hazeltine
Joyce Hazeltine
Secretary of the Senate

Senator MURKOWSKI. Yes, Mr. Neufeld. On the Belle Fourche project, do you think that the potential use of surplus water for industry or whatever might change the balance sheet of the project, that is the benefit versus cost?

Mr. NEUFELD. Any additional revenue that will come into the project will certainly change the balance sheet and make it appear more palatable.

Senator MURKOWSKI. Do you think it will?

Mr. NEUFELD. Yes, sir.

Senator MURKOWSKI. Would this perhaps change the administration's views?

Mr. NEUFELD. I can't speak for the administration. I certainly hope so.

Senator MURKOWSKI. I am not asking that. I am just asking your opinion.

Mr. NEUFELD. I anticipate it would make the project look better in their eyes, yes, sir. It would reduce the Federal commitment and increase the non-Federal commitment which seems to be their policy.

Senator MURKOWSKI. How much do you think it might contribute, a rough percentage based on your expert opinion?

Mr. NEUFELD. My expert opinion—I really have no idea, Mr. Chairman.

Senator MURKOWSKI. Would you care to hazard a guess?

Mr. NEUFELD. No; I really wouldn't.

Senator MURKOWSKI. Could you make one and submit it for the record, a guess?

Mr. **Neufeld**. I can explain the example.

Senator **Murkowski**. The record is going to be open 2 weeks.

Mr. **Neufeld**. Yes, sir, I could.

Senator **Murkowski**. Will you?

Mr. **Neufeld**. Yes, sir.

Senator **Murkowski**. Let the record note that in 2 weeks we will have an educated guess from the secretary.

[Subsequent to the hearing Mr. Neufeld supplied the following:]

SOUTH Dakota **Department of**
Water & Natural Resources
Joe Foss Building
Pierre, South Dakota 57501

February 22, 1982

The Honorable Frank H. Murkowski, Chairman
Sub-Committee on Water and Power
United States Senate Committee on Energy and Natural Resources
Washington, D.C. 20510

Dear Senator Murkowski:

In response to your request concerning potential revenues to the Belle Fourche Irrigation District if salvaged water were sold to non-Federal industrial users, I am enclosing a copy of the agreement between the South Dakota Conservancy District and ETSI Pipeline Project for the transfer of a water right for use in ETSI's coal slurry pipeline. Generally, this contract provides for payments to the South Dakota Conservancy District of $9,000,000 per year with some indexing for inflation once construction starts on the coal slurry pipeline proper. Whether or not these revenues could be realized by the Belle Fourche Irrigation District is problematic at this time. Our previous discussions with other energy interests have revealed no substantial interest in purchasing additional supplies of water at this or any other price. The basic reasons for this are that the energy companies are either not willing to pay the price or have not yet defined their projects to the point of determining what actual water costs they can bear. In addition, please understand that the State of South Dakota is neither committed to nor opposed to providing additional water supplies to energy development in Wyoming. We do, however, want to keep our options open to either approve or disapprove any proposal that may come forward in the future. For this reason I addressed the amendment proposed by the Belle Fourche Irrigation District for inclusion in S 933. Enclosed please find a memorandum from me to Owen Ambur of Senator Abdnor's staff suggesting proposed changes in the Irrigation District's proposed amendment.

I hope that inclusion of this amendment as contained in the attached memorandum will do a great deal to strengthen the bill.

Sincerely,

Warren R. Neufeld
Secretary

Enclosure

MEMORANDUM

To : Owen Ambur

From : Bob Neufeld

Subject : Proposed Amendment of State of South Dakota to S. 933

Date : February 10, 1982

The underlined portions of the following are the changes that South Dakota believes must be added to your proposal to protect its interests:

The Secretary is authorized to amend existing contracts and enter into additional contracts as may be necessary to implement and facilitate any future agreement between the Belle Fourche Irrigation District and non-Federal entities involving the sale of Belle Fourche Project water for use by such non-Federal interest for other than irrigation purposes; provided that, the net proceeds from such transactions between the Secretary and such non-Federal interest shall be paid to the United States as partial reimbursement of the cost of the works authorized by this Act, that such transactions are not in violation of applicable state laws, and that such transactions shall be subject to the consent and conditions of the State of South Dakota to such water use by such non-federal interest in accordance with the laws of South Dakota and the provisions of the Belle Fourche River Compact between the States of Wyoming and South Dakota to which the consent of Congress was given in the Act of February 26, 1944, ch. 64, 58 Stat. 94.

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Mr. NEUFELD. I can cite here the example of the arrangement we have entered into with Energy Transportation Systems, Inc., for coal slurry, and a similar amount of water is anticipated to bring in $9 million a year plus to the Treasury of the State of South Dakota for betterment development purposes. I believe that would be a ceiling, a ceiling of things that could be expected if this water were to be sold from the Belle Fourche project.

Senator MURKOWSKI. Mr. Secretary, we would appreciate receiving any comments that you would make on the administration's amendments to Senate bill 1553 for the record.

Mr. NEUFELD. My only comment is that we are in full support. We think it is an acceptable compromise.

Senator MURKOWSKI. I thank you for your testimony, and we will look forward to hearing from you for the record on your best guess, and thank you very much.

Mr. NEUFELD. The pheasants are still flying in South Dakota, Mr. Chairman.

Senator MURKOWSKI. Are there any aboriginal rights to shoot them out of season?

Mr. NEUFELD. I will submit that one for the record, Mr. Chairman.

Senator MURKOWSKI. Our next witness will be Mr. Larry Suciu, attorney representing the Yuma County Water Users' Association.

Mr. Suciu, we welcome you to the witness stand and look forward to your testimony, and I would ask that you proceed.

STATEMENT OF LARRY W. SUCIU, ATTORNEY REPRESENTING THE YUMA COUNTY WATER USERS' ASSOCIATION

Mr. SUCIU. Thank you, sir. First of all, I did come here with a prepared position report that I prepared on behalf of my client, and I think a copy of that is with your committee, but I looked it over the other night, and much to my horror, there has been a mistake. I think my word processor burped or something, but there is a duplication in the middle, and what I would like to do is have the opportunity to correct that and resubmit it if the record is going to be open for a couple of weeks.

Senator MURKOWSKI. The record will be open for 2 weeks, and will receive the submission of Mr. Suciu with a correction in his testimony. Please proceed.

Mr. SUCIU. Mr. Chairman, I think that probably the easiest thing for me to do is just explain to you why I am sitting in this room this morning, and I think I can do that fairly quickly.

As you know, I represent the Yuma County Water Users' Association which is an Arizona not-for-profit corporation that was formed in 1903 under the laws of the Arizona territory for the purpose of contracting with the U.S. Government in the development of the Yuma project.

Our corporation first signed a contract with the Government in 1906 which was the original contract whereby we agreed to repay a part of the cost of the Yuma project. Specifically the Valley Division is our responsibility.

The project was constructed, and from its inception the headquarters has been located at this quartermaster depot site that we are talking about; so you will understand the proportion, the piece of land that we are talking about is 5.1 acres, and there are about 15 buildings more or less on that 5.5 acres, but I think that the central interest of the Senate bill and the people at Crossing Park centers around two of those buildings, the present headquarters site of the association, and the buildings we are using as a shop right now. There are other buildings there, but I don't think they have any particular historical significance.

In any event, those two buildings have always been utilized by the Bureau of Reclamation while the project was being constructed and in 1951, a contract was signed between the association and the Bureau whereby operation and control of the project was turned over to the association.

Now as a part of that contract, certain works were transferred. One of the works transferred was on the building that we are talking about here today. That is the buildings that are presently being utilized by the Bureau of Reclamation for the same purpose.

Ever since the 1951 contract, the association has occupied that location using it as a headquarters site. Now by headquarters site, I mean that is where the office is and that is where the maintenance is done on the equipment. The association has other property located in the Yuma Valley that has been utilized to store heavy equipment that they use to maintain the canals. For your information, under the headquarters site, it is directly adjacent to the Colorado River in what is old downtown Yuma near the city hall. Most of the works of the project are located far to the south of that in the Yuma Valley. Some 53,000 areas are included in the Valley Division.

In any event, the association paid out all of its construction charges in the 1906 contract in 1962, and ever since that time we have been a paid-out project.

One of the things that the association thinks it bought as a result of the paying out of these charges is the right to stay where it is as long as there is the Yuma project. Under our view of the 1951 contract, we have a right to stay there as long as we are performing satisfactorily under the terms of that agreement and utilize the property for the purposes of a headquarters to the project. Obviously if there is going to be a project, it has to have a headquarters.

In about 1975, about our earliest record, when there was first some talk of the Crossing Park and the possibility of moving the water users from where we are now to some other location, and we have some minutes that will be part of what I have submitted, of the first meeting that I can find on that when it was discussed, and from that first meeting until today the position of the association has really always been the same.

We are presently satisfied with our existing facilities, and they are adequate for our needs and what we see our needs to be in the future, but we recognize the interest of the city and other people there in developing the park, and as an accommodation to those interests, we agree that we would relocate so long as we weren't put in a worse position than we are now, and so long as we did not incur any substantial liability.

We started off along that line, and from 1975 on things pretty much progressed along those lines. As a matter of fact, the association began negotiating with the Bureau of Reclamation for an alternative site in the Yuma Valley to move to in the event all this happened. As a matter of fact, we have such a contract. It was executed in January 1980. It relates to 28.34 acres in the Yuma Valley. We have it on lease. The initial terms of the lease goes to 1990, and then it is subject to renewal in the event we perform certain improvements to the satisfaction of the Bureau. We have a letter of commitment from the Bureau as of just a couple of months ago that the relocation of our equipment yard off of its existing place on to the new land will be sufficient to qualify us for renewal of that lease, and they are telling us that the renewal would be up to a period of 50 years.

The site that we have is big enough to accommodate both the equipment yard and the headquarters site. We were more or less content with the way things are going until this last summer. I guess it was after this legislation was introduced, and of course, the corresponding legislation in the House, and we being the association had a meeting adopting a resolution favoring both of those bills on July 6 I believe it was, and later found out that on that same day we came across an internal memorandum from the Bureau of Reclamation suggesting some amendments to the legislation to the effect that we were going to end up paying the cost of this move. That was the initial legislation that provided for a \$2½ appropriation and provided a contract would have to be signed between the water users and the Bureau to rent that at fair market value.

Well, to say that the members of my board were horrified would be to understate the problem, and they immediately wrote a letter which was delivered to just about everybody in sight I think explaining that they would not support or would not relocate on terms like that. The association is not in the business of renovating buildings, and they are not interested in paying the cost of it. They did say, however, that they were still willing to relocate if it didn't cost anything.

In response to that, we got a letter from Mr. Rugman which in effect told us that the position of the Bureau was that it was necessary for the association to pay these costs because of the effect of an OMB Circular of 1959. They had identified the association as a special interest group which was receiving a special benefit as part of this legislation.

We did not perceive that there is any benefit to the association from this legislation at all. We don't want to move. This was not our idea. We agreed to do it, but only in the event that it didn't cost us any money. We are still willing to do that, but we are not willing to take on any additional construction charges or to pay the cost of the move.

One of the things that is significant about that is that nobody really knows what the cost of this move might be. To our knowledge, no one has really ever analyzed it, so that is why I am here.

I suggested to the Board that it would probably be sufficient just to write a letter to the committee, but they disagreed, so here I am, and as I say, I will correct the statement that I prepared, and as an amendment to that statement is a copy of just about everything that is in our file that relates to this project, and I think it pretty much will bring you up to date on where we are.

Senator MURKOWSKI. Well, I've got the message, and I appreciate your testimony. I don't know whether I agree that the committee is the best one to resolve a concern over whether you should or shouldn't move. You are willing to move obviously if it doesn't cost you anything, which is certainly fair.

I would, speaking as the chairman, subject to the position of Senator McClure, of course, say that it is always much better if you can settle your differences in your own area, but this is a little more complex in view of the historical aspect associated here.

I assure you that the committee will take your recommendations under consideration, and we will attempt to bat this thing out to hopefully resolve it to the satisfaction of at least half of those people that are following this arbitration. If we can do better than that with a higher percentage of support, why that would be fine, too. It usually doesn't work out that way.

Mr. SUCIU. I have the same problem.

Senator MURKOWSKI. In the meantime, be assured that there is 2 weeks if those who are opposed and the supporters want to try to get together and harmonize. I don't know whether there are more historical sites than we have people or if it is the other way around, but in any event, we will deliberate as we are supposed to do, and I appreciate your testimony. I assure you that your statement will be corrected as you wish upon submission, and thank you.

Mr. SUCIU. Thank you, sir.

[The prepared statement of Mr. Suciu follows:]

STATEMENT OF POSITION OF
YUMA COUNTY WATER USERS ASSOCIATION
RELATIVE TO SENATE BILL 698

Before The

SUBCOMMITTEE ON WATER AND POWER
OF THE
SENATE COMMITTEE ON ENERGY AND NATURAL RESOURCES

February 12, 1982

By

LARRY W. SUCIU
ATTORNEY FOR YUMA COUNTY WATER USERS ASSOCIATION

I

BACKGROUND

The Yuma County Water Users' Association is an Arizona corporation which was organized under the laws of the territory or Arizona for the purpose of contracting with the United States Government for the construction and operation of certain irrigation works to be located primarily in the Yuma Valley near Yuma, Arizona and to be designated as the "Yuma Project". The first such contract was signed in 1906. As a part of that contract, the Association guaranteed to repay the construction charges for the portion of the Yuma Project, known as the "Valley Division".

In due course, an irrigation system was constructed all as contemplated by the reclamation laws. On June 15, 1951, the works of the Valley Division were transferred to the Association for perpetual care, operation and maintenance. This was accomplished by written contract, a copy of which is attached as Exhibit "A".

Included in the works transferred to the Association by way of the 1951 contract was the Yuma Project grounds and the structures thereon which were formerly known as the military reservation of Yuma which included the area known as the Quartermaster Depot area. These structures had formerly been assigned to the Bureau of Reclamation and were used as the headquarters for the Yuma Project. Since the time of the execution of the 1951 agreement, the Association has operated the Valley Division in accordance with the terms of that contract and has continuously occupied the Yuma Project grounds as its headquarters. In 1962, the Association completed repayment of all construction charges guaranteed by them pursuant to the 1906 agreement, and ever since that time, the Valley Division has been considered "paid out" under the Reclamation Laws.

In 1964, Secretary of the Interior, Stewart Udall, designated the Yuma crossing and associated sites, including the Quarter Master Depot, Fort Yuma, the Territorial Prison and the Customs House as a national historic landmark. The buildings being utilized by the Water Users' Association as a headquarters are located within the Quarter Masters Depot site.

During 1975, local interest developed concerning the creation of a river front park in Yuma and the restoration of certain historical sites along the river. As a part of all of this, the Association was contacted with regard to whether or not it would be willing to relocate its headquarters facility to accommodate the restoration and development of the proposed park.

The subject of relocation was first formally discussed at a meeting conducted at the Association office on June 20, 1975. The meeting was attended by representatives of the City and County of Yuma as well as representatives of the State Parks Department, the Bureau of Land Management and the United States Bureau of Reclamation. Minutes of this first meeting are attached as Exhibit "B".

At the meeting, the Association representatives, acknowledged a willingness to relocate their headquarters, provided funds could be made available for a new location, new buildings, the cost of service facilities and the cost of moving. At that time, no one had any real idea of what amount of money would be involved but the discussion centered around figures in excess of $1,000,000. At this first meeting, it was acknowledged by the Bureau of Reclamation representative in attendance, Ted Moser, that the present Association headquarters was "encumbered federal property".

As a result of the June 20th meeting, an Ad Hoc Committee was established to explore ways to develop and restore the Yuma Crossing Historic Site. One of the main functions of the committee was to seek out sources of revenue to fund the plan. After this first meeting, the Association's manager, Mr. Tommy Long, prepared a basic itemization of the nature of the existing headquarter's facility and the anticipated needs of the Association if alternative quarters were to be made available. A copy of Mr. Long's letter of September 22, 1975 is attached as Exhibit "C". Thereafter, the Bureau of Reclamation made what was referred to as a "Reconnaisance Type" cost estimate of the proposed relocation of the Association headquarters. A copy of that document, which is dated October 16, 1975, is attached as Exhibit "D".

The Ad Hoc Committee continued its work on the project, along with various state and federal agencies, including the State Office of Economic Planning and Development. That department made a report dated October 7, 1975 and entitled "Yuma Quartermaster Depot Site", which concluded that the Quartermaster Depot Site development project could not be accomplished unless the Association headquarters could be relocated. It was therefore determined that the most immediate problem was to come up with a reasonable method whereby that could be accomplished.

The Department's 1975 report was the subject of a letter of July 11, 1977 from State Senator Jones Osborn to Dr. Brent Brown, who was then Director of the Office of Economic Planning. (See Exhibit E") As is noted in the letter, the plan in 1977 was for the State to request that all relocation costs relating to the project be absorbed by the Department of the Interior. On September 16, 1977, then Governor Castro wrote a letter to Cecil D. Andrus who was the encumbent Secretary of the Interior. (Exhibit "F") In his letter, the Governor made a formal request that the Federal Government absorb the cost of relocating the Association to a new headquarters and convey title to the Quartermaster Site depot site to the State for its use in the developing a park.

Federal funding of the relocation was not forthcoming so the Committee began to pursue new revenue sources. Specifically, the Ad Hoc Committee decided to seek a grant from the Four Corners Regional Commission. Initially, an application was going to be made for grant money sufficient to make a detailed cost study and presumably thereafter, a subsequent application would be made for construction funds.

As is noted in a September 13, 1979 letter from the City of Yuma to the Bureau of Reclamation, (Exhibit "G") the application of the City for funds was not approved. The City therefore requested that the Bureau update its initial cost study relative to the Association's relocation and pursuant to that request, an updated report was prepared and transmitted to the City on October 2, 1979. (see Exhibit "H")

At about this same time, the Association began negotiations with the Bureau of Reclamation for the acquisition of additional Government ground for use as a potential new headquarter's site. Eventually an agreement was reached in the form of Contract No. 0-07-34-L0203. (Exhibit "I")

Legislation providing for the relocation of the Association headquarters and making appropriations of Federal funds to cover the cost of that relocation were subsequently introduced in both the House and the Senate on more than one occasion, but the current matters pending are (HR 3168) and (S 698). After the introduction of these legislative measures, the Board of Governors of the Yuma County Water Users' Association adopted a resolution supporting enactment of the legislation,

> "* * * providing that sufficient funds are made available to the Association on a non-reimbursable basis to fully fund the cost of movement, construction of headquarters building, shops, warehouses, storage, petroleum, oil and lubricant facilities, one residence, utilities, bridge and roads for a new Association headquarters * * *." See Exhibit "J"

Copies of this resolution were made available to members of the Arizona Delegation, the Committee on Interior and Insular

Affairs of the House of Representatives, the Committee on Energy and Natural Resources of the United States Senate and the Ad Hoc Committee studying the development of the park.

Ironically, on the same day that the Association Board adopted its Resolution in support of the pending legislation, the Bureau of Reclamation issued an internal memorandum recommending amendment of HR 3168, (which was identical to S 698) to essentially provide for amendment of the legislation to include an appropriation of $2,500,000, and adding a requirement that the Association enter into a contract with the United States to rent the new proposed facility "at a fair market rental rate". (See Exhibit "K")

For the Association, this was a shocking turn of events as it constituted a complete reversal of all that had transpired since the relocation plan was conceived in 1975. Presently, the Association does not pay rental on its headquarter's facilities and the fair market rental on a facility costing $2,500,000 would obviously be very substantial and could have a devastating financial effect upon the Association.

The Association immediately voiced its objections to the change of direction by way of a letter dated August 11, 1981, (Exhibit "L") which was distributed to members of the Arizona Delegation and representatives of the Bureau of Reclamation. The Bureau of Reclamation responded to Mr. Long's letter on September 22, 1981 (Exhibit "M") to the effect that the proposed new requirement on the Association was required or indicated by Circular A-25 of September 23, 1959 from the Office of Management and Budget.

II

THE POSITION OF THE ASSOCIATION

A. As To The Facts:

The Association's position regarding the relocation of its headquarters, has not changed since the plan was originally conceived in 1975; that is, the Association is willing to relocate as an accommodation to the community, so long as it does suffer substantial adverse effects.

The attached exhibits show that all parties to the relocation plan have always been aware of the Association's position. Further, they show that it was never, at anytime, suggested by anyone that all, or part of the financial burden of developing the Quartermaster's Site should be paid by the members of the Yuma County Water Users' Association. Rather, the documents show that it has always been understood that since the plan was one for the betterment of the community generally, its costs should be paid by the community generally and not just the members of the Association. While the Association will honor its original commitment, it will not voluntarily accept the amended version.

B. As To The Law:

The Association's right to continue to occupy its present headquarters is protected under the terms of the contract. This occupancy continues so long as the Association is operating the Valley Division in accordance with the 1951 contract. Under the terms of that agreement, the Government does not have the right to take any transferred works back from the Association, unless it is determined that the Association has failed "* * *to perform substantially any provision of this contract* * *." To date, the Association is not aware of any contention by anyone that it is not properly performing under the 1951 agreement.

The Association believes, therefore, that it is entitled to continue occupancy of its present headquarters site indefinitely and that it cannot be removed therefrom over its objection, except in accordance with the terms of the 1951 agreement. The Association will not voluntarily move from its existing headquarters to any new location if the result of such move is a financial or legal detriment.

C. As to The Alleged Benefit:

The Association also believes that the Bureau of Reclamation is incorrect in its conclusion that OMB Circular A-25 in any way requires that a charge be imposed upon the Association for the use of any new facilities. The reason given by the Bureau as to why they believe the Circular is applicable to this case, is that the Bureau somehow perceives that the Association will derive special benefit from the move. That is obviously incorrect. As a matter of fact, if anything, the proposed move will be detrimental to the Association without regard to who pays the costs.

The Association did not initiate the idea of moving its headquarters. The Board of Governors considers the present facilities to be adequate for both present and foreseeable future needs. The Association is therefore content to remain at its present location indefinitely, as provided in the 1951 Agreement.

The tenure of the Association at its proposed new site is not indefinite. The lease on the new headquarter's property is a 10 year lease which, although subject to renewal at later times, is obviously less desirable and more tenuous than the existing arrangement. One might well ask how the Association would be benefited by removing itself from adequate quarters which are available perpetually, on a rent free basis, to a yet to be constructed facility of unknown sufficiency which is only available for a limited time?

The answer to the question is clear, but if there is any doubt about the sincerity of the Association's belief that the proposed move is not beneficial, it only need be recalled that the Association is more than willing to forget about the proposed relocation entirely and return matters to their former state prior to the first meeting in June, 1975.

D. As To The Form of SB 698.

To date, no one has ever completed a detailed evaluation of just what costs are likely to be involved in the proposed relocation. The evaluation made 1975 can only be called a "ball park estimate", and all that happened in 1979 was that the original guessed at figures were increased to reflect inflation. The Association does not know where the $2,500,000 figure referred to by the Bureau was developed, or what items are included in that figure. There is reason to believe, however, that the actual cost of a relocation might be significantly higher than $2,500,000. Under the terms of the proposed legislation, (particularly subparagraph (b)), the Association would be left at the mercy of the Secretary of the Interior in determining what facilities would be made available to it and for how long, and also as to what the terms and conditions of this occupancy might be. That, we presume, means what amount of rent will be required of the Association.

It is difficult to conceive of a position that would be worse for the Association than the one created by the proposed legislation. Once moved from its present location, the Association will be forced to take whatever quarters the Department designates on whatever terms they dictate. Under the Bill, as written, if the Association did not agree with the Secretary as to what was adequate, or what terms were fair, it would have no choice but to provide its own headquarters entirely at its own expense. The Board feels this position is not to be envied.

If the legislation is to go forward, it must contain safeguards both against requirements that the Association bear the costs, either present or future of the relocation, and insuring the Association's position relative to the Department is no worse than it is now.

III

CONCLUSION

The Association still remains willing to honor its original commitment to relocate its headquarters so long as it does not suffer as a result of the accommodation. The Board of Governors will not voluntarily relocate from the present headquarters site under any arrangement which will require it to either repay additional construction charges or pay rental in anything other than a nominal amount.

The Association's present occupancy of the Quartermaster Depot Site is protected by contract with the United States Government. It would be unconscionable for the United States to ignore its obligations under this agreement, and foist an unwanted and potentially unreasonable economical liability on the shoulders of the farmers of the Yuma Valley in order to pay for a park which is designed to benefit the community.

Respectfully Submitted,

Larry W. Suciu, Attorney for
Yuma County Water Users' Assn.

APPENDIX OF EXHIBITS

EXHIBIT "A" - Contract dated June 15, 1951

EXHIBIT "B" - Minutes of meeting on June 20, 1975

EXHIBIT "C" - Letter (Long) of September 22, 1975

EXHIBIT "D" - Cost Estimate dated October 16, 1975

EXHIBIT "E" - Letter (Osborn) of July 11, 1977

EXHIBIT "F" - Letter (Castro) of September 16, 1977

EXHIBIT "G" - Letter (City) of September 13, 1979

EXHIBIT "H" - Updated cost report of October 2, 1979

EXHIBIT "I" - Contract No. 0-07-34-L0203

EXHIBIT "J" - Resolution

EXHIBIT "K" - Resolution

EXHIBIT "L" - Letter (Long) of August 11, 1981

EXHIBIT "M" - Letter (Bureau) of September 22, 1981

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION

YUMA PROJECT
VALLEY DIVISION

CONTRACT FOR THE CARE, OPERATION AND MAINTENANCE OF WORKS OF THE VALLEY DIVISION, YUMA PROJECT

1. THIS CONTRACT, made this 15th day of June, 19 51, pursuant to the Act of Congress approved June 17, 1902 (32 Stat. 388), and acts amendatory thereof or supplementary thereto, particularly the Act of August 13, 1914 (38 Stat. 686), between THE UNITED STATES OF AMERICA, hereinafter referred to as the "United States", represented by E. A. Moritz Regional Director, Region 3, Bureau of Reclamation, Department of the Interior, hereinafter referred to as the "Regional Director", and YUMA COUNTY WATER USERS' ASSOCIATION, a corporation created, organized and existing under and by virtue of the laws of the State of Arizona and authorized to do business in the State of California, with its principal place of business at Yuma, Arizona, hereinafter referred to as the "Association";

WITNESSETH:

Explanatory Recitals

2. WHEREAS, the United States has constructed and is now engaged in the operation and maintenance of certain irrigation works known as and designated the Yuma Project, hereinafter referred to as the "Project", situate primarily in the State of Arizona, but situate also as to a part or portion thereof in the State of California; and

3. WHEREAS, the Association has heretofore entered into an agreement with the United States dated May 31, 1906, whereby the

EXHIBIT "A"

Association, among other things, guaranteed the payments for that part of the cost of irrigation works of said project apportioned by the Secretary of the Interior, hereinafter referred to as the "Secretary", to its shareholders, known as the Valley Division of the project, hereinafter referred to as the "division", and agreed also that it would promptly collect or require prompt payment thereof in such manner as the Secretary may direct; and

4. WHEREAS, by another contract between the Association and the United States dated February 5, 1931, the Association assumed the payment of all delinquent and unaccrued construction and supplemental construction charges, operation and maintenance and water rental charges due or to become due from lands of the division, as determined by the Secretary; and

5. WHEREAS, the Association by its duly authorized representatives has requested the Secretary to enter into a supplemental contract providing, among other things, for the transfer to the Association of the care, operation and maintenance of the Valley Division of the Yuma Project; and

6. WHEREAS, by contracts with the United States certain persons, firms and corporations are entitled to the delivery of water through the irrigation works of the Valley Division or through works primarily designed to serve the Valley Division, and to other contractual rights; and

7. WHEREAS, the Secretary has determined, that in his judgment, such supplemental contract is both practicable and in keeping with the

general purposes of the aforesaid Act of June 17, 1902, and acts amendatory thereof or supplementary thereto; and

8. WHEREAS, the parties hereto desire by this supplement to the contracts aforesaid, to provide, in accordance with and subject to the provisions and conditions hereinafter set forth, for the transfer to the Association of the care, operation and maintenance of the division, and other works and properties used or useful for the delivery to the Association of a supply of water for the irrigation of the irrigable lands situate within the division, and for the continued delivery through the works hereinafter transferred of water to those entitled thereto by contracts with the United States;

NOW, THEREFORE, in consideration of the mutual covenants herein contained, the parties hereto agree as follows:

Works to be Transferred

9. On the fifteenth day after the Regional Director shall have notified the Association that this contract has been executed by and for the United States, the United States will transfer to the Association the care, operation and maintenance of the following real and personal property used or useful for operative purposes of the Valley Division of the Yuma Project:

(i) That portion of the Yuma Main Canal situate in Imperial County, California, beginning at a point designated as Engineer Station 718 ⁄ 00 and ending at the Colorado River Siphon inlet;

(ii) The Colorado River Siphon under the Colorado River, connecting the Yuma Main Canal in California with the project canals situate in Yuma County, Arizona;

(iii) All project lands in the Valley Division of the Yuma Project, situate in Yuma County, Arizona, hitherto used for operative purposes of the project, together with the irrigation works and equipment situate therein, consisting generally of irrigation and drainage canals, laterals, ditches and other conduits, gates, pipes, flumes, buildings and structures of every kind, pumps, machinery, electric transmission and distribution lines and attendant facilities of nominal voltages lower than 34.5 KV, telephone lines, and structures, tools and appliances, and all property of whatsoever kind, real, personal or mixed, appurtenant to or used, or constructed or otherwise acquired to be used for operative purposes on the Yuma Project, excepting therefrom the Yuma Valley Levee and Railroad, with all trackage, and equipment as determined by the Secretary to be necessary to maintain and operate the same, the Yuma Auxiliary Supply Canal, the B-Lift Pumping Plant, and all electric power lines and equipment exclusively used in the operation of said pumping plant, and all power circuits of a nominal voltage of 34.5 KV and poles and crossarms supporting such circuits;

(iv) That portion of the Military Reservation, Yuma, Yuma County, Arizona, known at the Yuma Project Grounds, with the structures thereon, the use of which has hitherto been assigned to the Bureau of Reclamation, excepting therefrom the trackage of the Yuma Valley Railroad and those buildings heretofore constructed with All-American Canal funds, as well as the lands occupied by said buildings and the two storage yards now being utilized for the All-American Canal System, and excepting therefrom also the tract of land heretofore reserved and set apart by Executive Order dated March 26, 1902, for the use of the Weather Bureau, together with all improvements thereon;

(v) The two Bureau of Reclamation lots located at 480 First Street and 155 North Fifth Avenue, Yuma, Yuma County, Arizona, with all appurtenances thereon.

Upon request, the United States will furnish access to such records, files, engineering maps and data as the Secretary may deem necessary or useful to the Association in carrying out its obligations under this contract, and will permit or cause copies to be made thereof, at his discretion.

Delivery of Water by Association

10. The Association will, from and after the fifteenth day following notification referred to in Article 9, assume the care, operation and

maintenance of the lands and irrigation works described and not excepted in said Article nine (9), and agrees, while caring for, operating and maintaining such lands and works,

> (i) To transport and deliver to the Yuma Auxiliary Supply Canal the irrigation water, not in excess of 100 cubic feet per second, required for the operations of the Yuma Auxiliary Project, as directed by the Secretary;
>
> (ii) To perform all valid obligations of the United States, as conclusively determined by the Secretary, pertaining to the transportation and/or delivery of water from or through any of the works transferred hereunder.

The transportation and delivery of water as aforesaid shall be without expense to the United States or its successors except as provided in Article 16.

Care of Works Transferred Hereunder

11. (a) The Association shall, at its own cost and without expense to the United States, care for and operate and maintain the works transferred hereunder in such manner that the same shall remain in as good and efficient condition and of equal capacity for the carriage, control and distribution of water, as when received from the United States hereunder, and shall use all methods practicable to insure the economical and beneficial use of water. It is mutually understood that the Association will acquire, in addition to the equipment transferred to the Association under this contract, other equipment needed for satisfactory operation of the works transferred hereunder. After the care, operation and maintenance of any works shall have been assumed by the Association, the Association shall hold the United States, its officers, agents, attorneys, employees and successors or assigns harmless from every claim for

damages to persons or property, direct or indirect, and of whatever nature, arising out of or in any manner connected with the care, operation and maintenance thereof.

(b) The Association shall prosecute, apart from and in addition to the care, operation and maintenance hereinbefore required, a continuing program of rehabilitation and betterment of existing facilities, including but not limited to checks, drops, turnouts, measuring devices and other structures, canal and lateral lining, drains and pumps, in such manner, degree and kind as may be satisfactory to the Secretary. The Association shall submit to the Regional Director not later than October 1 of each year a program of rehabilitation and betterment work to be carried out by it during the calendar year beginning January 1 thereafter. The Association shall perform during the calendar years 1951 and 1952 the following program of rehabilitation and betterment work, subject to minor changes in the work to be performed as may in the opinion of the Secretary and the Association be expedient, economical, necessary or advisable, and the availability of necessary construction materials and labor:

(1) Replace approximately 150 old timber lateral and farm turnouts with concrete structures equipped with gates varying from 18 to 36 inches in diameter and containing adequate measuring devices, as standard design criteria requires.

(2) Replace approximately 65 timber lateral checkgates with concrete structures, to be equipped with gate leaves and lifting devices.

(3) Replace approximately 14 old timber canal checks with concrete structures equipped with radial gates and lifting mechanisms. Number of gates and size to be installed in each structure will be in accordance with standard hydraulic design criteria applicable at that location.

(4) Replace approximately 27 old timber bridges over canals, laterals, and drains with new structures conforming to standard plans of the Bureau of Reclamation.

(5) Rehabilitate or replace Boundary Pumping Plant with new pumps, motors and other necessary equipment and controls to secure efficient and semi-automatic operation, having substantially the same capacity as the present installation.

(c) If in the opinion of the Secretary the Association shall have failed at any time, or from time to time, to perform substantially any provision of this contract, the United States may, on sixty (60) days' written notice to the Association, resume the control of any of the works mentioned in and not excepted from the operation of Article 9 hereof, and thereafter care for, operate and maintain the same, provided that only three (3) days' notice shall be required in the event of failure to perform any provision of Paragraphs (i) and (ii) of Article 10. If the Association determines that it is unable to continue the operation and maintenance of the works transferred hereunder, it may return said works to the United States on January 1 of any year upon twelve months advance notice in writing. In the event the care, operation and maintenance of the transferred works is resumed by the United States the Association shall advance to the United States within ten (10) days after written demand by the Secretary, the estimated cost of such care, operation and maintenance by the United States, plus fifteen percentum (15%) to cover overhead and general expense, during the period commencing with the date that the care, operation and maintenance of such works is assumed by the United States and terminating on the first day of January next succeeding. During such time thereafter as the United States shall retain the operation and maintenance of such works, the Association shall advance to the United States on December first of each year, upon estimates therefor to be furnished by the United States on or before September first next preceding, the estimated cost of such operation and maintenance, plus fifteen percentum (15%) to cover overhead and general expense, for the following calendar year; provided, however, that in the event that the United States resumes the care, operation and maintenance of the works transferred hereunder on or after September 1 of any year, the estimate to be furnished by the United States for the ensuing calendar year may be given at such reasonable time as the Secretary shall determine. If the amount advanced by the Association for any period shall prove to be insufficient to pay the cost of operation and maintenance by the United States during such period, the amount of such deficiency shall be paid forthwith by the Association to the United States upon notice thereof and demand therefor by the Secretary. The surplus of any amount so advanced by the Association for operation and maintenance of such works by the United States during any period shall be credited on the estimated cost of operation and maintenance by the United States during the succeeding period. Any surplus of any advances made by the Association for operation and maintenance which shall remain unexpended and unobligated for such purpose by the United States at such time as the care, operation and maintenance of such works are returned to the Association shall be refunded to the Association, or, at the option of the Secretary, applied against any obligation of the Association under this contract which is due at that time. Nothing herein contained shall relieve the Association of the obligation to pay, in any event, all operation and maintenance payments under Article 16 (a) hereof, and interest as provided in this contract.

(d) Whenever the United States shall have resumed the care, operation and maintenance of any such works pursuant to the provisions of subdivision (c) of this Article, the Secretary, upon written request by the Association accompanied by assurances satisfactory to him, may, upon sixty (60) days' written notice to the Association, return the care, operation and maintenance of any such works to the Association under the provisions of this contract.

Delivery of Water and Electric Energy to Association

12. (a) As far as reasonable diligence will permit, the United States will, from and after the date of the assumption by the Association of the care, operation and maintenance of the works transferred hereunder, from storage available in Lake Mead, deliver to or for the Association through the Yuma Main Canal, at or near Station 718+00 of said canal, such quantities of water, including all other water diverted for use within the division from the Colorado River System, as may be

ordered by the Association and as may be reasonably required and beneficially used for the irrigation of the irrigable lands situate within the division, together with such additional water as may be required for the Association to comply with its obligations under Article 10 hereof, subject to the availability of such water for use in Arizona under the provisions of the Colorado River Compact and the Act of December 21, 1928 (45 Stat. 1057), and subject to:

> (1) The availability of water for the division under the provisions of the Colorado River Compact and the Act of December 21, 1928 (45 Stat. 1057);
>
> (2) Executive A, Seventy-eighth Congress, second session, a treaty between the United States of America and the United Mexican States, signed at Washington on February 3, 1944, relating to the utilization of the waters of the Colorado and Tijuana Rivers and of the Rio Grande from Fort Quitman, Texas, to the Gulf of Mexico, and Executive H, Seventy-eighth Congress, second session, a protocol, signed at Washington on November 14, 1944, supplementary to the treaty;
>
> (3) The express understanding and agreement by the Association that this contract is subject to the condition that Hoover Dam and Lake Mead shall be used: first, for river regulation, improvement of navigation and flood control, second, for irrigation and domestic uses and satisfaction of perfected rights in pursuance of Article VIII of the Colorado River Compact approved by Section 13 (a) of said Act of December 21, 1928, and third, for power, and furthermore that this contract is made upon the express condition and with the express covenant that the United States and the Association shall observe and be subject to and controlled by said Colorado River Compact and said Act of December 21, 1928, in the construction, management and operation of Hoover Dam, Lake Mead, canals and other works and the storage, diversion, delivery and use of water to be delivered to the Association hereunder;
>
> (4) The express understanding and agreement that such rights, if any, as the Association or the landowners within the division may have heretofore

acquired to the use of water from the Colorado River
are unimpaired by this contract; and

(5) The other terms, conditions and provisions
set forth in this contract;

provided, however, that nothing contained in this article shall be deemed to require the United States to maintain a water surface elevation at Engineer Station 718 ⁄ 00 of the Yuma Main Canal higher than 134.6 feet above sea level, United States Coast and Geodetic Survey datum, and provided, further, the United States reserves the right temporarily to discontinue or reduce the amount of water to be delivered to the Association whenever such discontinuance or reduction is made necessary for purposes of investigation, inspection, replacements, maintenance or repairs to Hoover Dam, Imperial Dam, or any other works of the United States above Engineer Station 718 ⁄ 00 on the Yuma Main Canal, it being understood that as far as feasible the United States will give the Association reasonable notice in advance of such temporary discontinuance or reduction. The United States, its officer, agents, attorneys, employees, successors and assigns shall not be liable for damages when, for any reason whatever, suspensions or reductions in delivery of water occur. Subject to the terms, conditions, and provisions set forth in this contract, this contract is for permanent water service.

(b) Subject to the availability thereof at Siphon Drop Power Plant, as determined by the Secretary, the United States will furnish supplies of electric energy to the Association for irrigation and drainage pumping purposes and necessary incidental use on the Division as may be reasonably required by the Association. So far as practicable, as determined by the Secretary, delivery of such electric energy shall continue to be made by the United States in manner and at places customary as of the date the Association assumes the care, operation and maintenance of the works transferred hereunder. Payment for electric energy furnished to the Association as aforesaid shall be made in such manner, at such times and at such rates as may be determined by the Secretary from time to time.

Responsibility for Distribution and Use of Water

13. (a) The Association shall be responsible for the control, carriage, handling, distribution and use of all water delivered or taken hereunder and shall hold the United States, its officer, agents, attorneys, employees and successors or assigns harmless from every claim for damages to persons or property, direct or indirect, and of whatever nature, arising out of or in any manner connected with the control, carriage, handling, distribution or use of such water.

(b) Not later than December 1 of each year the Association shall issue notice of annual operation and maintenance charges for the ensuing calendar year against all irrigable lands of the Valley Division of the Yuma Irrigation Project under valid water-right contract, which notices shall provide for a minimum charge per acre whether water is used or not, payment of said charge to permit the delivery of not to exceed a specified number of acre-feet of water per acre on certain sandy areas shown on the list attached to Public Notice No. 28, dated February 10, 1930, issued by the Secretary, which list may be amended by the Association with the written approval of the Secretary, and of a specified number of acre-feet of water per acre on the other irrigable lands of said Valley Division, which said notices shall also provide for the assessment and collection of additional charges for deliveries of irrigation water in excess of the respective minimum quantities hereinabove mentioned. The Association shall submit said annual notices to the Secretary for approval sixty (60) days in advance of issuance thereof, and said notices shall not be issued unless and until so approved.

Keeping Works in Repair

14. Except in case of emergency, no substantial change in any of the works transferred to the Association under the provisions hereof shall be made by the Association without first having had and obtained the written consent of the Secretary, and the Secretary's opinion as to whether any change in any such works is or is not substantial shall be conclusive and binding upon the parties hereto. The Association shall promptly make any and all repairs to, and replacements of, all works transferred to it under the terms and conditions hereof which, in the opinion of the Secretary, are deemed necessary for the proper operation and maintenance of such works. In case of neglect or failure of the Association to make such repairs, the United States may, at the option of the Secretary, after reasonable notice to the Association, cause such repairs to be made and charge the actual cost thereof, plus fifteen percentum (15%) to cover overhead and general expense, to the Association. On or before October 1 of each calendar year the United States shall give written notice to the Association of the amount expended by the United States for repairs under this Article during the twelve-month period ending on September 1 immediately preceding. Such cost, plus overhead and general expense as stated above, shall be repaid by the Association on January 1 immediately succeeding.

Protection Against Claims

15. In the event that any claim of whatsoever nature heretofore or hereafter made against the United States results in costs which, in the opinion of the Secretary, are wholly or partly chargeable against the Valley Division of the Yuma Project, the Association shall pay to the United States such portion of said costs as the Secretary determines to be appropriately allocable to the Association, in not to exceed ten (10) equal annual installments. The first of such installments shall be payable on January 1 next succeeding the delivery to the Association of written demand for payment of its portion of said costs and the remaining installments shall be payable on each January 1 thereafter until all of the Association's portion of said costs has been paid in full.

Payment by Association of Annual Operation and Maintenance Costs

16. (a) In lieu of the payments to be made to the United States by the Association as provided in Article 8 (a) of the aforesaid contract of February 5, 1931, and as a condition precedent to the delivery of water to the Association hereunder and to the continuation of such delivery, the Association shall make payments to the United States, as follows:

> On November 15, 1951, for the calendar year 1952 upon written estimate therefor to be furnished by the Secretary on or before September 1, 1951; and
>
> On each succeeding November 15 for each calendar year subsequent to calendar year 1952 on written estimates therefor to be furnished by the Secretary on or before each September 1 next preceding such November 15,

such sum as in the opinion of the Secretary constitutes an appropriate share allocable to the Association of the estimated cost, including overhead and general expense, of operation and maintenance of the Yuma Main Canal above Engineer Station 718 ⁄ 00, electric power lines and attendant facilities of the Yuma Project, the care, operation and maintenance of which is retained by the United States, Imperial Dam and appurtenant works, Laguna Dam, All-American Canal, and all works below Imperial Dam and reservoir to be utilized by the United States for the benefit of any of the lands situate within the division, which allocable share shall include, with respect to the component parts of the Imperial Dam and appurtenant works, Laguna Dam and All-American Canal, such part of the estimated cost of operation and maintenance of said component parts of the Imperial Dam and appurtenant works, Laguna Dam and All-American Canal as bears the same ratio to the total estimated cost of such operation and maintenance as the capacity provided therein for the division bears to the total capacity provided therein for the Association and for all other agencies, deducting therefrom such sum as, in the opinion of the Secretary, constitutes an appropriate share allocable to the Yuma Auxiliary Project on the basis of used capacity, of the estimated cost, including reasonable overhead and general expense, for the same period, of operation and maintenance of irrigation works common to the Yuma Auxiliary Project and the division, the care, operation and maintenance of which is hereby transferred to the Association, provided that if the amounts payable hereunder on behalf of the Yuma Auxiliary Project exceed the amounts payable by the Association, the United States shall not be required to make any advance payment to the Association, but differences between actual costs and estimated costs shall be adjusted in next succeeding estimates. In the event that the United States hereafter transfers the care, operation and maintenance of any or all of said dams and works above Engineer Station 718 ≁ 00 to any agency or agencies other than the Association, the Association shall, following the service by the Secretary of a written notice to that effect, and in conformity with the provisions and conditions of such notice advance annually to such agency or agencies its proportionate share of estimated future costs of operation and maintenance of such transferred works based on such formula as may be determined by the Secretary to be equitable and just, provided that such proportionate share shall, with respect to the component parts of the Imperial Dam and appurtenant works, Laguna Dam and All-American Canal include such part of the estimated cost of operation and maintenance of said component parts of the Imperial Dam and appurtenant works, Laguna Dam and All-American Canal as bears the same ratio to the total estimated cost of such operation and maintenance as the capacity provided therein for the division bears to the total capacity provided therein for the Association and for all other agencies, including provisions requiring that differences between actual costs and estimated costs be adjusted in next succeeding estimates, provided, however, that the Association shall be obligated to make annual advances to the United States pursuant to this Article with respect to all or any of such works during the periods when they are under the care, operation and maintenance of the United States. The payments to be made by the Association to the United States for each calendar year hereunder shall also include the estimated costs during such year to the United States, as determined by the Secretary, of (a) examining and re-examining lands within the division for the purpose of determining their productivity, (b) maintaining any and all records and accounts for the division, determined by the Secretary to be necessary or desirable, including but not limited to individual water-right accounts, and (c) rendering bills and statements to water-users, the Association or to any other person, firm, corporation or entity.

(b) As soon as the Secretary determines it to be practicable to do so, but in no event later than sixty (60) days after the Association assumes the care, operation and maintenance of the works transferred hereunder, the United States will return to the Association any unobligated balance of funds advanced by the Association to the United States under Article 8 (a) of the contract of February 5, 1931, less the sum required to be paid by the Association pursuant to subdivision (a) of this article, as determined by the Secretary.

(c) In addition, the Association shall pay to the United States the sum of thirty-six thousand three hundred eighty-nine and twenty-seven hundredths dollars ($36,389.27) constituting that portion of the costs of operation and maintenance of Imperial Dam and appurtenant works and of the All-American Canal incurred during the period commencing August 4, 1941, and ending December 31, 1947, which has been determined by the Secretary to be appropriately allocable to the Association, which sum shall be paid in annual installments as follows: six thousand sixty-nine and twenty-seven hundredths dollars ($6,069.27) on or before January 1, 1952, and six thousand sixty-four dollars ($6,064.00) on or before each January 1 thereafter, until all of said sum has been paid in full; and the Association shall also pay to the United States the sum of eighty thousand three hundred six and twenty-four hundredths dollars ($80,306.24) constituting that portion of the costs of drainage incurred by the United States pursuant to the "Yuma Valley Drainage Agreement" of February 4, 1947, which was defrayed with funds allotted from Gila Project appropriations and which has been determined by the Secretary to be appropriately allocable to the Association, which sum shall be paid in annual installments as follows: thirteen thousand three hundred eighty-six and twenty-four hundredths dollars ($13,386.24) on or before January 1, 1952, and thirteen thousand three hundred and eighty-four dollars ($13,384.00) on or before each January 1 thereafter, until all of said sum has been paid in full. The payment by the Association of the costs of drainage incurred pursuant to the "Yuma Valley Drainage Agreement" of February 4, 1947 shall not be construed as an admission for any other purpose that the drainage problem of the lands within the division was caused or created by the works of the Valley Division.

Profits from Project

17. From and after the date of the assumption by the Association of the care, operation and maintenance of the works transferred hereunder, the net profits, as determined by the Secretary, thereafter derived from leases of project lands and the sale and use of town sites within the division; from the furnishing of water or water service to other than water-right applicants from the irrigation works of the division; and the net profits from the Siphon Drop Powerplant after reserves for replacements, and/or depreciation and/or other appropriate purposes allocable to the lands of the division, all as determined by the Secretary shall be credited annually, first on account of costs of construction,

second on account of operation and maintenance charges, now or hereafter payable by the Association to the United States, including but not limited to payments for any rehabilitation work undertaken by the United States on behalf of the division, and third, to the accumulation and maintenance of the reserve fund provided for in Article 18 hereof.

Accumulation and Use of Reserve Fund

18. (a) Beginning with the calendar year 1951, the Association shall accumulate and maintain, in the manner hereinafter provided, a reserve fund which shall be available only for the purposes and in the circumstances hereinafter mentioned.

(b) Said reserve fund shall be accumulated by the Association at the following rate: fifty thousand dollars ($50,000.00) during calendar year 1951, fifty thousand dollars ($50,000.00) during calendar year 1952, and twenty-five thousand dollars ($25,000.00) during each calendar year thereafter, until the reserve fund thus accumulated shall total two hundred fifty thousand dollars ($250,000.00), which total sum shall be maintained at all times, provided, however, that the Association shall not be required to replenish said reserve fund by an amount in excess of twenty-five thousand dollars ($25,000.00) in any one year.

(c) Except in case of emergency, expenditures shall be made from said reserve fund only with the advance approval of the Secretary and only for the purposes of meeting major, unforeseen costs of operation and maintenance, repair, and replacement of works transferred hereunder.

(d) Said reserve fund shall be deposited and maintained, apart from other Association funds, in a depository meeting the requirements of the laws of Arizona relative to deposits of State and county moneys and upon conditions concerning its withdrawal which are satisfactory to the Secretary.

(e) During such time or times as the operation and maintenance of works transferred hereunder shall have been resumed by the United States in accordance with the provisions of Article 11 hereof, said reserve fund shall be made available for use by the United States for the same purposes as said reserve fund was theretofore available for use by the Association.

Refusal of Water in Case of Default

19. In the event of default for a period of more than twelve (12) months in any payment due the United States under this contract, the United States reserves the right to refuse to deliver water to the Association for its benefit or the benefit of any of its shareholders, or, in the discretion of the Secretary, to reduce such beneficial deliveries in such proportion as the amount in default by the Association bears to the total amount due; provided, however, that the Association shall not thereby be relieved of any obligations assumed under this contract for the delivery or the discharge of water other than for its benefit or the benefit of its shareholders. No water shall be delivered to or for any tract of land in the division during any time that the owners or holders thereof are delinquent in the payment of any assessments heretofore or hereafter levied by the Association or any toll or other charges which the Association may be authorized to make.

Title to Remain in the United States

20. Title to the works heretofore or hereafter constructed by the United States shall be and remain in the United States until otherwise provided by Congress, notwithstanding transfer of the care, operation and maintenance of any of said works to the Association.

Rules and Regulations

21. There is reserved to the Secretary the right to prescribe and enforce rules and regulations not inconsistent with this contract governing the care, operation and maintenance of the works which are transferred hereunder. Such rules and regulations may be modified, revised and/or extended from time to time, after notice to the Association and opportunity for it to present its views, as may be deemed proper, necessary or desirable by the Secretary to carry out the true intent and meaning of the law and of this contract, or amendments thereof, or to protect the interests of the United States. The Association hereby agrees that in the care, operation and maintenance of the works which are transferred hereunder, all such rules and regulations will be fully adhered to.

Inspection by the United States

22. The Secretary may cause to be made from time to time a reasonable inspection of any of the works heretofore constructed by the United States or hereafter constructed by the United States or by the Association hereunder to the end that he may ascertain whether the terms of this contract are being satisfactorily executed by the Association. The actual cost of any such inspection shall be included in computing the annual operation and maintenance costs payable by the

Association to the United States pursuant to Article 16 hereof. The Secretary shall at all times have the right of ingress to and egress from all works transferred hereunder, and all works, lands and rights-of-way of the Association for the purpose of inspection, repairs and maintenance of works reserved to the United States, and for all other purposes.

Access to Books and Records

23. Subject to applicable Federal laws and regulations, the proper officers or agents of the Association shall have full and free access at all reasonable times to the books and records of the United States, as far as they relate to the matters covered by this contract, with the right at any time during office hours to make copies of or from the same; and the Secretary shall have the same right in respect to the books and records of the Association.

Development and Compilation of Data and Keeping of Books, Records and Reports

24. The Association shall with reasonable accuracy maintain a modern set of books of account, in form acceptable to the Secretary, showing all the financial transactions of the Association and keep such other records and make such reports as the Secretary may require and in the manner and form he may require. The Association shall make full and complete annual written reports to the United States, on forms to be approved and furnished by the Secretary, covering all water delivered hereunder to the lands of the Valley Division of the Yuma Project, the disposition of such water, and the nature, extent and total estimated value of each kind of crop produced on the total acreage of said division during each calendar year as follows: on November 1,

preliminary crop reports covering the calendar year ending December 31 next following and containing final figures in so far as possible; on January 15, final crop reports covering the calendar year ended December 31 next preceding; and on February 1, reports covering all water delivered hereunder to the lands of said division and the disposition of such water during the calendar year ended December 31 next preceding as hereinafter provided. The Association shall in such manner as the Secretary may require, measure and keep complete records, in form satisfactory to the Secretary, of the quantities of water delivered to the Association through the Yuma Main Canal, recovered from drain and waste ditches, delivered to the Yuma Auxiliary Supply Canal, delivered to the United Mexican States, delivered to each water user in the division, returned to the Colorado River in measurable quantities, and other receipts or deliveries of water. The Association shall also maintain existing groundwater measurement wells, install such additional wells for groundwater measurement as the Secretary may from time to time require, and make and keep records of monthly observations at all existing and future wells. The Association shall furnish such financial reports and statements of its operation and condition as may be required from time to time by the Secretary. The records and data from which any reports or statements are made shall be accessible to the United States on demand by the Secretary and the Association shall co-operate to the fullest extent in facilitating any investigation by the United States of the facts shown in such records or data.

Determinations by Secretary

25. The Secretary's decision on all questions of fact arising under this contract, including but not limited to those instances where express reference is herein made to a determination to be made or opinion rendered by the Secretary, shall be conclusive and binding upon the parties hereto. Pending the Secretary's determination of any dispute or disagreement in connection with any determination made or opinion rendered by the Regional Director, the Association shall perform and comply with all the provisions and conditions of this contract in conformity with such determination or opinion.

Interest on Charges Due from Association

26. No interest shall be charged on any charges due from the Association hereunder, except that on all such charges or any part thereof, which remain unpaid by the Association to the United States after the same become due, an interest charge of one-half of one percentum (1/2%) of the amount unpaid shall be added thereto, and thereafter an additional interest charge of one-half of one percentum (1/2%) of the principal sum unpaid shall be added on the first day of each succeeding calendar month until the amount due, including such interest, is paid in full.

Application of Reclamation Law

27. Except as provided in the Boulder Canyon Project Act, to the extent that it is applicable, the Reclamation Law shall govern the provisions of this contract.

Enforcement of Excess Land Laws

28. Pursuant to the Federal Reclamation Laws, no irrigation water shall be furnished by means of the project works to more than 160 acres of land in the ownership of any one person for which construction charges have not been paid. The Association agrees that it will maintain in a manner satisfactory to the Secretary all records required to establish whether the landowners of the Valley Division are in compliance with the excess land provisions of Reclamation Law and further agrees that it will not deliver water to acreages in a single ownership in excess of that permitted thereby.

SEE PUBLIC LAW 383
1958 RECLAMATION LAWS
P. 143

Approval of Association Contracts

29. No contract made by the Association with reference to the care, operation or maintenance of any of the lands or works transferred pursuant to Article 9 hereof, or relating to the delivery or distribution of water, except contracts for the usual labor, equipment, supplies and services in connection with the operation and maintenance thereof, shall be valid until approved by the Secretary. A draft of every such contract shall be submitted to the Secretary for approval as to form before execution.

Employment of Manager or Superintendent

30. The Association shall employ as manager or superintendent a competent person who shall have had experience in the operation of irrigation works. Upon notice from the Secretary that said manager or superintendent is or has become unsatisfactory the Association shall within sixty (60) days, and as often as such notice is given, terminate the employment of such unsatisfactory employee.

Contingent Upon Appropriations or Allotments of Funds

31. The expenditure of any money or the performance of any work by the United States herein provided for, which may require appropriations of money by Congress or the allotment of funds, shall be contingent upon such appropriations or allotments being made. The failure of Congress so to appropriate funds or the failure of an allotment of funds shall not relieve the Association from any obligations under this contract and no liability shall accrue against the United States, its officers, agents, attorneys, employees, successors or assigns, in case such funds are not appropriated or allotted.

Contract to be Authorized by Election

32. The execution of this contract by the Association shall be authorized by an affirmative vote of not less than two-thirds of the votes cast at an election held for that purpose. The Association shall, without delay and at its own cost and expense, furnish the United States for its files certified copies of all proceedings relating to the authorization of this contract.

Notices

33. (a) Any notice, demand or request required or authorized by this contract to be given or made to or upon the United States shall be delivered, or mailed postage prepaid, to the Regional Director, Region 3, United States Bureau of Reclamation, Boulder City, Nevada.

(b) Any notice, demand or request required or authorized by this contract to be given or made to or upon the Association shall be delivered, or mailed postage prepaid, to the President of the Yuma County Water Users' Association, Yuma, Arizona.

(c) The designation of any person specified in this article, or the address of any such person, may be changed at any time by notice given in the same manner as provided in this article for other notices.

Rights Reserved Under Section 3737, Revised Statutes

34. All rights of action for breach of any of the provisions of this contract are reserved to the United States as provided in Section 3737 of the Revised Statutes of the United States.

Remedies Under Contract Not Exclusive

35. Nothing contained in this contract shall be construed as in any manner abridging, limiting or depriving the United States or the Association of any means of enforcing any remedy either at law or in equity for the breach of any of the provisions hereof which it would otherwise have. The waiver of a breach of any of the provisions of this contract shall not be deemed to be a waiver of any provision hereof, or of any other or subsequent breach of any provision hereof.

Interest in Contract Not Transferable

36. No interest in this contract is transferable by the Association to any other party, and any such attempted transfer shall cause this contract to become subject to annulment at the option of the United States.

Priority of Claims of the United States

37. Claims of the United States arising out of this contract shall have priority over all others, secured or unsecured.

Officials Not to Benefit

38. No Member of or Delegate to Congress or Resident Commissioner shall be admitted to any share or part of this contract or to any

benefit that may arise herefrom, but this restriction shall not be construed to extend to this contract if made with a corporation or company for its general benefit.

Representatives and Successors of Secretary and Bureau Officers

39. The terms "Secretary" and "Regional Director", as used in this contract, shall include their respective duly appointed successors and authorized representatives.

Contracts of May 31, 1906, and February 5, 1931, to Remain in Full Force and Effect, Except as Herein Modified

40. Except as expressly modified by the provisions hereof the aforesaid contracts between the United States and the Association dated May 31, 1906, and February 5, 1931, respectively, shall be and remain in full force and effect.

Existing Contracts Affecting Works Transferred Hereunder

41. During such time or times as the Association shall be responsible for the care, operation and maintenance of any works transferred hereunder, the Association shall at its own cost and without expense to the United States assume, perform and discharge the obligations of the United States under any contract or contracts relating to the Yuma Project and existing at the effective date of this contract, the performance of which in the opinion of the Secretary requires or contemplates operation or maintenance of works for which the Association is then responsible.

IN WITNESS WHEREOF, the parties hereto have caused this contract to be executed the day and year first above written.

THE UNITED STATES OF AMERICA,

By E. A. Moritz
Regional Director, Region 3
Bureau of Reclamation
Department of the Interior

YUMA COUNTY WATER USERS' ASSOCIATION,

By John P. Smith Jr.
President.

Attest:

Darron G. Moody
Secretary.

Association Office - 6/20/75
In Attendance: City of Yuma - George Branner, Wes Krey
Yuma County - Gene Huckfeldt
USBR- Ted Moser, Millie Elkins
YCWUA-Archie Mellon, James Cuming, Tommy L. Long, Jim Carter,
Elizabeth L. Johnston, Bryant W. Jones
State Parks—Dennis McCarthy (Phx) Paul Malmberg
State Senator-Jones Osborne
BLM-H.M. Bruce, Karl Kipping, Ralph Conrad
Chairman: Ted Moser

The meeting was called to discuss the possibility of Yuma County Water Users' Association relocating so that all of the Headquarters area could be rehabilitated as a Historic Site as defined in the Federal Register. YCWUA was agreeable to the move provided funds can be allocated for a new location, building, service facilities and cost of moving. Manager Long stated that a new location should be selected that was compatible to the use of the Associations electrical transmission lines. He suggested a site in the area of Avenue B and 16th Street as a possibility. A trade of State for Federal land or vice versa might be necessary in obtaining the most advantageous location. Manager Long guessed the cost of the relocation could possibly run between $750,000 and $1,000,000. Mr. Moser agreed, though there has been no cost data engineering or research-that the move could be the higher figure. Mr. Moser stated his opinion was that the present Association Headquarters is encumbered Federal property. Mr. Moser explained the metal flume in the salinity channel would be replaced with concrete pipe inverted siphon and that the dredging program included plans for deepening and widening the river in the vicinity of the historical Yuma Crossing for a distance of probably a half mile. This would create a sediment collection basin if additional settling basins were not provided upstream. The intent is to restore the River Crossing as nearly as possible to its original configuration. This area should be dredged prior to moving downstream in the area of the desalting plant and prior to its construction. The City has approximately 100 acres between the levee and the river, but about 10 acres remains in private ownership. HUD funds may be available and with the development of the Historic Sites and Recreation area it should provide one of the greatest tourist and recreational facilities that Yuma has. It is anticipated the visitation man days would far exceed the present 180,000 visitors per year at the Territorial Prison. Historians and archaeologists will study and establish locations of land marks in the area. The State Parks Department will establish the historic area—possibly to include the old Yuma downtown area. The availability and possibility of funds from all sources must be studied and established.

EXHIBIT "B"

Funding and coordinating agencies to be considered:

- State Transportation & Highway Departments.
- State Park Funds.
- OEPAD (McCarthy & Jones to visit)
- Urban Development
- Green Belt
- City & County
- Federal
- USBR funds — maybe Federal will finance move.
- Contact Steiger & Udall

It was agreed an Ad Hoc Committee should be established and Mr. McCarthy, State Parks Department agreed to head, assisted by Mr. Bruce, BLM and appointees from City of Yuma and Yuma County.

YUMA COUNTY WATER USERS' ASSOCIATION
P. O. BOX 708 • N. 2ND AVE. AND CANAL • TELEPHONE 783-8396
YUMA, ARIZONA 85364

September 22, 1975

Mr. Ted Moser, Project Manager
Yuma Projects Office
Bureau of Reclamation
P. O. Bin 5569
Yuma, Arizona 85364

Dear Ted:

As previously requested, we are furnishing you with an itemized list of the square footage of those facilities we presently occupy and utilize at our present headquarters, along with other requirements that will necessitate a cost factor consideration. It is our understanding that your staff will determine or provide the State of Arizona with an estimated cost of moving our present headquarters to a new location to be determined. Should there be questions, we will be happy to work directly with your staff and we realize the cost estimate will be only an approximation.

The Association is not budgeted to reimburse the Bureau for the cost analysis or any other expenses involved in the planning required for moving our headquarters. We therefore request that no charge be made against the Common Works program or any other obligatory instrument.

Sincerely yours,

Tommy L. Long
Manager

TLL:el

Enclosures (3)

EXHIBIT "C"

Main Office Building

Area under roof - 6,950± SF

	± SF
President's Office	200
Board Meeting Room	380
Manager's Office	120
Watermaster's Office	710
Copy & Blueprint Room	150
Engineer's Equipment Storage	90
Restrooms (M & F)	220
Secretary-Treasurer's Office (3)	140
Assistant Secretary's Office (3)	220
Records Department (3)	580
Records Vault (1)	220
Engineering Department	630
Engineer's Vault (2)	340
Old Records Storage	220
Janitor's Room	260
Hallway	600
Exterior Walkway	1,870

NOTE: 50% of exterior walls are wood frame with stucco finish
50% of exterior walls are 18" adobe with stucco finish

(1) constructed of reinforced concrete; heavy steel door; concrete ceiling
(2) walls constructed of adobe; heavy steel door;concrete ceiling
(3) these areas are carpeted, all other areas have tile flooring

Shop Building

Area under roof - 12,150± SF

	± SF
Warehouse (1)	2,450
Warehouse Office	180
Warehouse Vault (2)	360
General Shop Area (3)	4,970
Tool Room	560
Shop Office	240
Shop Vault (2)	100
Tire Storage Room	800
Machine Shop (4)	400
Wash & Dressing Room (5)	250
Welding Shop (6)	660
Lube Room (6)	480
Car Wash Room (7)	700

(1) 180 LF of storage racks along walls, reinforced concrete floors
(2) fire proof walls - 12-18" thick
(3) 18" thick walls; reinforced concrete floors; structural steel framework; corrugated tin roofing; 5 ton crane runs full length of building; special reinforced foundations for lathe and 2 drill presses
(4) reinforced concrete floor; special mill foundation; caged area
(5) 4 showers, dressing & restrooms
(6) wood frame & corrugated tin construction with reinforced concrete floors
(7) wood columns supporting wood & corrugated tin roofing; 3 sides open; reinforced concrete floors

Residence Building

Area under roof - 2,400± SF

Concrete patio - 220± SF

wood frame & stucco construction; asphalt shingle roofing; desert cooling, needs painting

24 Stall Garage

Area under roof - 4,800± SF

wood frame & corrugated tin construction; corrugated tin roofing, no insulation; 50%± used for storage; 50%± used for autos

3 Stall Garage

Area under roof - 470± SF

wood frame with asphalt shingle roofing

Drainage Well Pump Supplies Storehouse

Area under roof - 500± SF

wood frame & corrugated tin construction; elevated wood floor; tin roofing, no insulation

wood storage platform - 780± SF
metal storage platform- 480± SF

Storage Shed & Lumber Yard

Area under roof - 2,300± SF

wood frame & corrugated tin construction; approximately 50% concrete flooring; 50% wood flooring; tin roofing, no insulation

Insulator Storage Shed

Area under roof - 220± SF

wood frame & corrugated tin construction; no insulation; timber flooring

Cement Storage Building

Area under roof - 910± SF

wood frame & corrugated tin construction; no insulation; timber flooring; elevated

Pump Shaft Storage Building

Area under roof - 400± SF

all timber construction with wood flooring

Ice House

Area under roof - 300+ SF
Insulated walk-in freezer box - - - - - - - - - - - - - - - - - 60± SF

elevated concrete dock & flooring

Miscellaneous Power, Lumber & Pump Supplies Storehouse

Area under roof - 3,950± SF

wood frame & corrugated tin construction; no insulation; wood flooring

Loading docks - timber construction - - - - - - - - - - - - - - - 400± SF

built-in lumber storage racks under building

Miscellaneous Storage Garage

Area under roof - 2,600± SF

wood frame & corrugated tin construction; no insulation; concrete flooring; - 5 each- 12' x 10' garage doors

Petroleum, Oil & Lubricants - 12,000 gallon & 8,000 gallon Storage Tanks

reinforced concrete foundations; large built-up earth pond; shaded fuel pump area - 3 pumps

Miscellaneous Storage Quonset Hut

Area under roof - 540± SF

concrete floor; no insulation; all metal construction

Gravel Parking Areas (company vehicles) - - - - - - - - - - - - - - - 15,500± SF

Gravel Parking Areas (private vehicles) - - - - - - - - - - - - - - - 14,500± SF

Reinforced Concrete Pavement - 14,000± SF

Other Requirements and Considerations

1. Fire protection facilities (fire hydrants, sprinklers)
2. Domestic and industrial water facilities including well
3. Moving transformers to serve new headquarters
4. Storm drainage
5. Exterior flood lighting facilities (security)
6. 6ft. protective chain link fence around new area for security
7. Landscaping
8. Street curbing & paving
9. Air conditioning, office & shops
10. Relocating ultra high frequency short wave radio system

CHKD BY	DATE	FEATURE

DETAILS Relocation Estimate

[illegible]

1. Main Office Bldg.

General Office Space	4520 sqft @ 20.00/sqft.	90,400.
Valts (2) Space	560 sqft. @ 30.00/sqft.	16,800.
		# 107,200

2 Shop Bldg.

General Shop Area	6510 Sq Ft	
" Warehouse	4270 Sq Ft	
	10,780 sqft @ 15.00	161,700.
2 Offices	420 Sq ft @ 20.00	8,400
Dressing & Rest Room	240 Sq ft @ 20.00	4,800
Wash Rack	1000 Sq ft @ 5.00	5,000
		# 180,500.

3 Residence

House	1400 sqft @ 20.00	28,000.00
Patio	220 sqft @ 6.00	1,320.00
		# 29,320.00

4. Garage

24 Stall	4800 sqft @ 5.00	24,000.00
3 "	470 sqft @ 5.00	2,350.00
		# 26,350.00

Sheet Total # 343,370

EXHIBIT "D"

CHKD BY	DATE	FEATURE
DETAILS Relocation Estimate		

5. Ware house (Store house)		
11,420 sqft @ 10.00		$114,200.00
6. Open Storage (Fence & A.C. Pavement) (Loading Dock)		
1,660 Sq ft @ 2.50		#4,150.00
7. Ice House		
300 Sqft @ 30.00		#9,000.00
8. P.O.L.		
Remove & Replace 12,000 Gal Tank 8,000 " " 3 Pump & Fueling Area.		2,000.00
9. Water System		
6" Well 200 ft @ 25.00		5,000.00
3000 Gal. Storge Tank		3,000.00
Fire Pump		3,000.00
Pneumatic System		1,000.00
		12,000.00
10. Septic System		
Septic Tank & Leech	L.S.	5,000.00
11. Fencing	L.S.	9,000.00

Sheet Total #155,350

DATE | FEATURE

DETAILS Relocation Estimate

12. Landscaping	L.S.	1500.00
13. Paving	LS.	3,000.00
14 Moving Radio Antena	LS.	1,000.00
		5,500.00
Sheet Total		5,500.00

348,570.00
155,350.00
5,500.00

504,320
50,260 Unlisted Items 10%

$555,000

transmitted [illegible]
Bridger [illegible] 1-5-91

STATE SENATOR
DISTRICT 5
THIRTY-THIRD LEGISLATURE

REPLY TO:

STATE CAPITOL, SENATE WING
PHOENIX, AZ 85007
PHONE 271-4138

P.O. BOX 271
YUMA, AZ 85364
PHONE 783-3240

JUDICIARY, CHAIRMAN
EDUCATION, VICE CHAIRMAN
GOVERNMENT

LEGISLATIVE COUNCIL

Arizona State Senate
Phoenix, Arizona

[illegible] to [illegible] used at meeting.

July 11, 1977

Dr. Brent Brown, Director
Office of Economic Planning
and Development
1645 West Jefferson
Phoenix, AZ 85007

Dear Brent:

This letter is a follow-up to our conversation in Phoenix on Thursday, July 7, regarding a renewed effort to advance the Yuma Crossing and Associated Sites Project.

You may recall that Ms. Beverly Brown and Mr. Dennis Thompson of your staff prepared a Staff Report dated October 7, 1975, entitled, "Yuma Quartermaster Depot Site."

In Section B of that report, your staff reported:

> "The State Parks Board has expressed an interest in providing for proper historical preservation of the remaining portions of the Landmark in Arizona currently being utilized in capacities not serving the highest public benefit -- namely, the Quartermaster Depot Site. Before the landmark can be preserved as a unit, the Yuma County Water Users' Association, who currently utilizes buildings in the Quartermaster Depot Site as operational headquarters, must be relocated. Then and only then can the State receive title to the remaining 5.5 acres of the Quartermaster Depot Site. Therefore, the immediate problem is to determine the most reasonable method by which the Yuma County Water Users' Association can be relocated."

Accordingly, Governor Castro agreed to send a letter to the Secretary of the Interior requesting that relocation costs be absorbed by the Department of Interior.

Section C of your report contains drafts of two letters for the Governor's signature: one to Arizona's congressional delegation, and the other to Mr. Kent Frizzell, Acting Secretary of Interior.

EXHIBIT "E"

I do not know if these letters were actually mailed. In any case, the national administration in Washington has changed and we have a new Secretary of Interior, and some new faces in our congressional delegation.

It is my request that your staff draft new letters for signature by Governor Castro to the new Secretary of Interior, and for signature by our congressional delegation, and undertake a new effort to find federal funding for relocation of the Yuma County Water Users' Association.

If you have any questions, please contact me. I am in Yuma most of the time now and can be reached at 783-3333, The Yuma Daily Sun.

Sincerely yours,

JONES OSBORN

JO:sg

P.S. -- You may be interested in knowing that the City of Yuma has tentatively budgeted $25,000 and the Yuma County Board of Supervisors an additional $15,000 for the purposes of planning an extensive riverfront park and recreation area, to include the Yuma Crossing and Associated Sites area. I mention this so that you may have evidence that local governments are moving ahead on this project.

xc: Governor Raul H. Castro
Mr. Mike Ramnes
Mr. Jim Bjornstad
Mr. Archie Mellon
Mr. Tommy Long
Mayor Ersel C. Byrd
Mr. Pat Callahan
Mr. Ed Hallenbach
Mr. Paul Malmberg
Mr. Darrell Krull
Mrs. Millie Elkins
Ms. Sharon Ferrier
Mr. William McGuire
Mr. Ed Lohnes

H. CASTRO
GOVERNOR

OFFICE OF THE GOVERNOR
STATE HOUSE
PHOENIX, ARIZONA 85007

IN REPLY
REFER TO

September 16, 1977

The Honorable Cecil D. Andrus
Secretary of the Interior
C Street between 18th and 19th Street, N.W.
Washington, DC 20240

Dear Cecil:

In 1964, Secretary of Interior, Stuart Udall, designated the Yuma Crossing and Associated Sites (Quartermaster Depot and Associated Buildings, Fort Yuma, Territorial Prison, Customs House) as a National Historic Landmark. (Please note the enclosed location map). The site is significant in the history of the American West; and it should be preserved into perpetuity because of its value in illustrating and interpreting the historic heritage of all citizens of the United States.

The State of Arizona is prepared to provide for the proper historic preservation of the Yuma Quartermaster's Depot and Associated Historic Sites. By 1977, the State will have invested over $160,000 in preserving this historic area. In addition, the City of Yuma has dedicated certain publicly owned parcels of property located along the Colorado River and immediately west of the Landmark for parks and recreational purposes.

Before the State can implement a historic preservation program for the Yuma Quartermaster's Depot Site -- an integral part of the entire historic complex at Yuma -- the Yuma County Water Users' Association, which currently utilizes buildings in the Quartermaster's Depot Site, must be relocated. The Association occupies the buildings as a result of past actions and policies of the Department of the Interior.

After a thorough study of the history of the Water Users' Association's occupancy of certain buildings within the Quartermaster's Depot Site, the State has concluded that the Department of the Interior should assume responsibility for (1) relocating the Association to new quarters, and (2) conveying all rights, title and interest for that portion of the Depot Site (approximately 5.5 acres) to the State of

EXHIBIT "F"

Arizona. This is essential if the intent of the National Historic Preservation Act of 1966 and associated Federal Acts is to be met.

Accompanying this letter are an Arizona State Parks Board Resolution pertaining to the role of the Department of Interior in this matter and background information which may be useful to your staff in analysing the State's position.

Thank you for your attention to a matter which we should jointly resolve.

Sincerely,

Raul H. Castro

Raul H. Castro
Governor

RHC:ewp

Enclosure

cc: Senator Dennis DeConcini
Senator Barry Goldwater
Representative Eldon Rudd
Representative John Rhodes
Representative Robert Stump
Representative Morris Udall

CITY OF YUMA

1793 FIRST AVENUE · YUMA, ARIZONA 85364 · (602) 783-1271

JAMES F. DEYO, MAYOR

MEMBERS OF THE
CITY COUNCIL

C.J. (CY) BOMBARD
TED B. BOWEN
JAMES JEFFERSON
RICHARD F. ORTEGA
MARY E. TELLBUESCHER
ROBERT H. TIPPETT

CITY ADMINISTRATOR
WILLIAM R. MCGUIRE

RECVD. SEP 17 1979
Action
Action Taken

Date	Initials	
9-17		108
		118
		150
		500
		320
		420

File

September 13, 1979

Mr. Ed Hollenback, Project Manager
Bureau of Reclamation
Yuma Division
Bin 5569
Yuma, Az 85364

Dear Mr. Hollenback:

As you know the City of Yuma is still in the planning stages for the development of Yuma Crossing Park along the Colorado River. Our present efforts are being directed towards refining the vague planning concepts provided by Myrick, Newman & Dahlberg in their Phase A Report.

The development of the historic portion of the park is, of course, predicated upon the ultimate relocation of the Yuma County Water Users Operations. This is a major obstacle relative to what the costs may be for relocation, as well as who will pick up the tab for the relocation.

The City of Yuma has applied to the Four Corners Regional Commission to obtain financial assistance to determine the costs associated with relocation. However, we have recently been informed by the Four Corners Regional Commission that our grant application was not approved.

It is my understanding that your agency conducted a study relative to relocation of the Water Users sometime back and cost figures derived may not be valid with today's market.

I would therefore like to explore with you the possibility of your agency performing an updated study identifying costs associated with relocating the Yuma County Water Users Operations to another site.

Your consideration on this matter will be greatly appreciated.

Thanking you in advance for your continued cooperation,

Sincerely,

Steve Bills

STEVE BILLS, Director
Special Services Department

SB/ja

United States Department of the Interior
BUREAU OF RECLAMATION
YUMA PROJECTS OFFICE
BIN 5569
YUMA, ARIZONA 85364

No archival work included. ✓

IN REPLY REFER TO: 303-250
715.

OCT 2 1979

Mr. Steve Bills, Director
Special Services Department
City of Yuma
1793 First Avenue
Yuma, Arizona 85364

Dear Mr. Bills:

In reply to your letter of September 13, 1979, requesting an updated cost study of the relocation of the Yuma County Water Users' operations to another site.

As you know a reconnaissance-type cost estimate was made in 1975 to give the Arizona State Parks Board a rough idea of what the relocation would cost. Following is the estimate with the cost figures indexed to today's market:

1. Main Office Building

General office space	4,520 ft^2 @ \$30/ft^2	\$135,600
Vault space (2)	560 ft^2 @ \$40/ft^2	22,400
		\$158,000

2. Shop Building

General shop area	6,510 ft^2	
General warehouse	4,270 ft^2	
	10,780 ft^2 @ \$25	\$269,500
Offices (2)	420 ft^2 @ \$30	12,600
Dressing and Restroom	240 ft^2 @ \$30	7,200
Wash rack	700 ft^2 @ \$10	7,000
		\$296,300

EXHIBIT "H"

3. Residence

House	1,400 ft^2 @ $30	$42,000
Patio	220 ft^2 @ $10	2,200
		$44,200

4. Garage

24 Stall	4,800 ft^2 @ $15	$72,000
3 Stall	470 ft^2 @ $15	7,050
		$79,050

5. Warehouse (Storehouse)

11,420 ft^2 @ $15	$171,300

6. Open Storage (Fence and AC Pavement)
(Loading Dock)

1,660 ft^2 @ $4	$ 6,640

7. Ice House	300 ft^2 @ $35	$10,500

8. Petroleum, Oil and Lubricants

Move: 12,000 gallon tank
8,000 gallon tank

Pumps (3) and fueling area	$ 8,000

9. Water System

6" well 200 ft @ $30	$6,000
3,000 gal storage tank	3,500
Fire pump	4,000
Pneumatic system	1,300
	$14,800

10. Septic System

Septic tank and leech system - Lump Sum	$6,500
11. Fencing - Lump Sum	$12,000
12. Landscaping - Lump Sum	$3,000
13. Paving - Lump Sum	$5,000
14. Moving Radio Antenna - Lump Sum	$1,500
15. Construct Access Bridge to Property - Lump Sum	$40,000

TOTAL	$856,790
Unlisted Items - 10%±	83,210
TOTAL FIELD COST	$940,000

There is no land acquisition costs included in the estimate as suitable Government land is available for use in relocating the facilities.

Sincerely,

Edward M. Hallenbeck

Edward M. Hallenbeck
Project Manager

bc: Mr. Tommy Long, Manager, Yuma County Water Users' Association,
Post Office Box 708, Yuma, Arizona 85364

Note to Mr. Long: Enclosed is copy of City of Yuma ltr dtd 9/13/79. Estimate provided in cooperation with City's efforts to develope Master Plan for Yuma Crossing Park.

United States Department of the Interior
Water and Power Resources Service
BUREAU OF RECLAMATION
YUMA PROJECTS OFFICE
BIN 5569
YUMA, ARIZONA 85364

IN REPLY REFER TO: 303-420
832.

MAR 2 6 1980

Mr. Tommy Long, Manager
Yuma County Water Users'
Association
Post Office Box 708
Yuma, Arizona 85364

Dear Mr. Long:

Enclosed for the Association's files is a conformed copy of the Lease of Land for Headquarters Site, bearing our No. 0-07-34-L0203, covering Lot 5 of Section 30, T. 9 S., R. 23 W., G&SRM, Arizona.

Sincerely,

A. D. Summers

A. Darrell Summers
Acting Project Manager

Enclosure

cc: Rolle, Jones, Benton, and Cole, Post Office Box 5240, Yuma, Arizona 85364 (w/encl.) Attn: Mr. Larry W. Suciu

EXHIBIT "I"

COPY

B.C. Draft 7/12/79
Rev. YPO 9/17/79
Rev. B.C. 11/1/79
Rev. YPO 1/14/80

Contract No. 0-07-34-L0203

United States
Department of the Interior
Bureau of Reclamation

Yuma County Water Users' Association

Lease for Land for Headquarters Site

1. THIS LEASE, made as of the 14th day of January, 1980, in pursuance of the Act of Congress approved June 17, 1902 (32 Stat. 388), and acts amendatory thereof or supplementary thereto, between the UNITED STATES OF AMERICA, hereinafter styled the "United States," represented by the officer executing this lease, hereinafter styled "Contracting Officer" and YUMA COUNTY WATER USERS' ASSOCIATION, a corporation created, organized and existing under and by virtue of the laws of the State of Arizona and authorized to do business at Yuma, Arizona, hereinafter styled the "Lessee";

WITNESSETH:

2. For and in consideration of the rents and covenants herein specified, it is hereby mutually agreed by the parties hereto as follows:

3. DESCRIPTION OF LAND LEASED.--Subject to the conditions hereinafter set forth, the United States does hereby lease to the lessee, for Project Headquarters site purposes, the following described premises in the County of Yuma, State of Arizona, to wit:

(a) Lot 5, in the SW¼SW¼ of section 30, Township 9 South, Range 23 West, G&SRM, Arizona, containing 28.34 acres, more or less, as shown on Bureau of Land Management Dependent Resurvey Plat (sheet 5 of 5) dated August 24, 1977, with privileges and appurtenances, subject, however, to the exceptions and reservations set out in the following Articles.

4. EXCEPTIONS AND RESERVATIONS.--There are excepted and reserved from the lease of the premises described in Article 3, the following:

(a) All land to which private rights have lawfully attached prior to the date of this lease.

Art. 1,2,3,4...

(b) The rights-of-way for ditches and canals provided by the Act of August 30, 1890 (26 Stat. 391).

(c) All rights-of-way heretofore acquired or initiated for highways, railroads, irrigation works, or for any other purpose.

(d) The right to continue the construction and operation and maintenance of any Federal irrigation works now located on said lands.

(e) A right-of-way along all section lines, or other practicable routes, when locations on section lines are not feasible, freely to give ingress to, passage over, and egress from all of said lands.

(f) The right of the officers, agents, employees, licensees, and permittees of the United States, at all proper times and places, freely to have ingress to, passage over, and egress from all of said lands, for the purpose of exercising, enforcing, and protecting the rights described in and reserved by this Article.

5. TERM OF LEASE.-- The lease of the premises described shall be for the period from January 14, 1980, to December 31, 1990, inclusive, unless sooner terminated or the lease term extended as hereinafter provided.

6. RENEWAL OF LEASE.--In the event lessee is not occupying leased premises at the end of the lease term recited in Article 5 above, by a showing of substantial building development on the land over and above leveling and fencing, the United States reserves the right to terminate the lease and all improvements installed thereon by the lessee shall become property of the United States. In event the Contracting Officer decides that lessee has evidenced diligence in developing and occupying the leased premises he shall authorize a lease renewal.

7. RENTAL CHARGES.--The lessee shall pay to the United States rental charges in amount of $1.00 for term of this lease.

8. MISCELLANEOUS CONDITIONS.--In the use of the leased premises the lessee shall faithfully observe the following conditions, and each of them:

(a) No unlawful business shall be carried on.

Art. ...4, 5, 6, 7, 8...

(b) The regulations of the Bureau of Reclamation relating to the leasing of lands shall be followed.

(c) No waste shall be committed.

(d) The Association shall assume care, operation and maintenance responsibilities for the headquarter's site under the same terms and conditions as apply to its responsibilities in administering the project works.

9. The lessee hereby agrees to hold harmless and indemnify the United States, their officers, agents, employees, successors, or assigns from and against any claims, demands, costs, losses, causes of action, damages, or liability, of whatsoever kind or nature arising out of or resulting from acts of negligence of the lessee, its officers, agents, or employees in the utilization by the lessee of the rights granted to it pursuant to this lease. The United States shall not be liable for any claims for damages arising from injuries to persons or damage to property, on or about said premises, excepting claims cognizable under the Act of June 25, 1948 (62 Stat. 892), as amended.

10. TERMINATION OF LEASE.--This lease shall terminate and all rights of the lessee hereunder shall cease, and the lessee shall quietly and peaceably deliver to the United States possession of the leased premises in like condition as when taken, reasonable wear and damage by the elements excepted:

(a) At the expiration of the term as provided by Article 5, or any renewal as provided in Article 6;

(b) At any time, upon written notice given to the United States by the lessee, served 365 days in advance thereof; or

(c) After failure of the lessee to observe any of the conditions of this lease.

Within thirty (30) days following expiration or other termination of this lease lessee shall restore the leased premises to a neat and orderly condition satisfactory to the Contracting Officer. If the premises are not restored as herein required within said thirty (30) day period such restoration may be performed by or at the instance of the United States, at the expense of the lessee. All personal property of the lessee shall be removed within said thirty (30) day period and if not so removed shall at the option of the United States become the property of the United States or at its option may be removed at the expense of the lessee.

Title to all improvements placed on the leased premises at any time during the lease period shall revert or vest in the name of the United States upon cancellation or expiration of the lease.

11. (a) The lessee hereinafter referred to as "Contractor" during the performance of this agreement agrees as follows:

(1) To comply with all the requirements of Section 114 of the Clear Air Act, as amended (42 USC 1857 et seq., as amended by Public Law 91-604), and Section 308 of the Federal Water Pollution Control Act (33 USC 1251 et seq., as amended by Public Law 92-500), respectively, relating to inspection, monitoring, entry, reports, and information, as well as other requirements specified in Section 114 and Section 308 of the Air Act and the Water Act, respectively, and all regulations and guidelines issued thereunder before the execution of this contract;

(2) That no portion of the work required by this contract will be performed in a facility listed on the Environmental Protection Agency (EPA) List of Violating Facilities on the date when this contract was executed unless and until the EPA eliminates the name of such facility or facilities from such listing;

(3) To use its best efforts to comply with clean air standards and clean water standards at the facility where the contract work is being performed; and

(4) To insert the substance of the provisions of this clause into any nonexempt subcontract, including this paragraph (a)(4).

(b) The terms used in this clause have the following meanings:

(1) The term "Air Act" means the Clean Air Act, as amended (42 USC 1857 et seq., as amended by Public Law 91-604);

(2) The term "Water Act" means Federal Water Pollution Control Act, as amended (33 USC 1251 et seq., as amended by Public Law 92-500);

(3) The term "Clean Air Standards" means any enforceable rules, regulations, guidelines, standards, limitations, orders, controls, prohibitions, or other requirements which are contained in, issued under, or otherwise adopted pursuant to the Air Act or Executive Order 11738, an applicable implementation plan as described in Section 110(d) of the Clean Air Act (42 USC 1857c-5(d)), and

implementation procedure or plan under Section 111(c) or Section 111(d), respectively, of the Air Act (42 USC 1857c-6(c) or (d)), or an approved implementation procedure under Section 112(d) of the Air Act (42 USC 1857c-7(d));

(4) The term "Clean Water Standards" means any enforceable limitation, control, condition, prohibition, standard, or requirement which is promulgated pursuant to the Water Act or contained in a permit issued to a discharger by the EPA or by a State under an approved program, as authorized by Section 402 of the Water Act (33 USC 1342), or by local government to ensure compliance with pretreatment regulations as required by Section 307 of the Water Act (33 USC 1317).

(5) The term "Compliance" means compliance with clean air or water standards. Compliance shall also mean compliance with a schedule of plan ordered or approved by a court of competent jurisdiction, the EPA or an air or water pollution control agency in accordance with the requirements of the Air Act or Water Act and regulations issued pursuant thereto.

(6) The term "Facility" means any building, plant, installation, structure, mine, vessel or other floating craft, location, or site of operations, owned, leased, or supervised by a contractor or subcontractor, to be utilized in the performance of a contract or subcontract. Where a location or site of operations contains or includes more than one building, plant, installation, or structure, the entire location or site shall be deemed to be a facility except where the Director, Office of Federal Activities, EPA determines that independent facilities are collocated in one geographical area.

12. Equal Opportunity Clause.--The Lessee, hereinafter referred to as "Contractor," during the performance of this contract agrees as follows:

(a) The Contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. The Contractor will take affirmative action to ensure that applicants are employed, and the employees are treated during employment without regard to their race, color, religion, sex, or national origin. Such action shall include, but not be limited to, the following: Employment, upgrading, demotion, or transfer, recruitment or recruitment advertising; layoff or termination, rates of pay or other forms of compensation and selection for training, including apprenticeship. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the Contracting Officer setting forth the provisions of this nondiscrimination clause.

(b) The Contractor will, in all solicitations or advertisements for employees, placed by or on behalf of the Contractor, state that all qualified applicants will receive consideration for employment without regard to their race, color, religion, sex, or national origin.

(c) The Contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided by the agency Contracting Officer, advising the labor union or workers' representative of the Contractor's commitments under this nondiscrimination clause and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

(d) The Contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.

(e) The Contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by the rules, regulations, and orders of the Secretay of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the contracting officer and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

(f) In the event of the Contractor's noncompliance with the nondiscrimination clauses of this Contract or with any of such rules, regulations, or orders, this Contract may be canceled, terminated, or suspended in whole or in part, and the Contractor may be declared ineligible for further Government contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

(g) The Contractor will include the provisions of paragraphs (a) through (g) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to Section 204 of Executive Order 11246 or September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The Contractor will take such action with respect to any subcontract or purchase order as the contracting agency may direct as a means of enforcing such provisions, including

Art. ...12...

sanctions for noncompliance; Provided, however, That in the event the Contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the contracting agency, the Contractor may request the United States to enter into such litigation to protect the interests of the United States.

13. SERVICE OF WRITTEN NOTICE ON THE LESSEE ON TERMINATION BECAUSE OF FAILURE TO OBSERVE SUCH CONDITION.--The notices provided in this Article shall be served by registered mail addressed to the respective post office addresses given at the foot of this lease, and the mailing of any such notice properly enclosed, addressed, stamped, and registered, shall be considered service.

14. OFFICIALS NOT TO BENEFIT.--No Member of or Delegate to Congress or Resident Commissioner shall be admitted to any share or part of this contract or to any benefit arising therefrom. Nothing, however, herein contained shall be construed to extend to any incorporated company if the contract is for the general benefit of such corporation or company.

15. SUCCESSORS IN INTEREST OBLIGATED.--The provisions of this lease shall apply to and bind the assigns of the United States, and the heirs, executors, administrators, and assigns of the lessee.

16. CONVENANT AGAINST CONTINGENT FEES.--The lessee warrants that no person or selling agency has been employed or retained to solicit or secure this contract upon an agreement or understanding for a commission, percentage, brokerage, or contingent fee, excepting bona fide employees or bona fide established commercial or selling agencies maintained by the lessee for the purpose of securing business. For breach or violation of this warranty, the United States shall have the right to annul this contract without liability or in its discretion to require the lessee to pay in addition to the contract price or consideration, the full amount of such commission, percentage, brokerage, or contingent fee.

IN WITNESS WHEREOF the parties have hereunto subscribed their names as of the date first above written.

THE UNITED STATES OF AMERICA

By /s/ Eugene Hinds
Regional Director
Lower Colorado Region
Bureau of Reclamation
P. O. Box 427
Boulder City, Nevada

YUMA COUNTY WATER USERS' ASSOCIATION

Attest:

Elizabeth L. Johnston
Secretary

By
President
P.O. Box 708
Yuma, Arizona 85364

ACKNOWLEDGMENT

State of Nevada)
) ss.
County of Clark)

On this 28th day of February, 19 80, before me, Rebecca A. Dalton, a Notary Public in and for said County and State personally appeared Eugene Hinds, Regional Director, Lower Colorado Region, Water and Power Resources Service, United States Department of the Interior, known to me to be the person described in the foregoing instrument, and acknowledged to me that he executed the same on behalf of the United States of America in the capacity therein stated and for the purpose therein contained.

Rebecca A. Dalton

Notary Public in and for the County of
Clark, State of Nevada

REBECCA A. DALTON
NOTARY PUBLIC
State of Nevada, Clark County
My commission expires Aug. 7, 1982

RESOLUTION

RESOLVED, that the Yuma County Water Users' Association, an Arizona Corporation, hereby approves as to form the "Lease for Land for Headquarters Site" Contract No. 0-07-34-L0203 subject to certain modifications in Article 6, the "Renewal of Lease" between the United States of America and the Yuma County Water Users' Association,

BE IT FURTHER RESOLVED, that the President and Secretary of the Association are authorized to execute said Contract on behalf of the Association after recommended revisions are made.

Certification

I, Elizabeth L. Johnston, Secretary of the Yuma County Water Users' Association, an Arizona corporation, do hereby certify that the foregoing is a true and exact copy of a Resolution unanimously adopted by the Board of Governors of said corporation at a regular meeting of the Board of Governors held on the 3rd day of December, 1979 at 1:30 P.M. at the main office of the corporation at Yuma, Arizona, which said meeting was duly convened; I further certify that the said Resolution has not been revoked or rescinded and that the same is now in force and effect.

Witness my hand as Secretary of said corporation on this the 3rd day of December, 1979.

Elizabeth L. Johnston
Secretary

RESOLUTION

WHEREAS the headquarters of the Yuma County Water Users' Association is presently located on an area of historical significance to the County of Yuma, State of Arizona and the United States; and

WHEREAS it is the desire of various governmental bodies and organizations interested in preserving and protecting historical sites to move the Association headquarters from its present location to a new location on the Yuma Mesa; and

WHEREAS it is the desire of the Association to cooperate with these governmental entities and associations and to make its present location site (excluding City North Fifth Avenue and First Street property) available for their use, provided that suitable financial arrangements are concluded whereby the expense of moving the Association will not be charged to the Association or its members; and

WHEREAS legislation has been introduced into the Congress of the United States in the form of HR-3168 and S-698 to facilitate the proposed movement of the Association headquarters, and both bills have been assigned to committees for hearings;

NOW THEREFORE BE IT RESOLVED BY THE BOARD OF GOVERNORS OF THE YUMA COUNTY WATER USERS' ASSOCIATION:

1. That the Association supports the adoption of legislation such as HR-3168 and S-698 to allow for the relocation of the headquarters of the Association from its present location to the Yuma Mesa, providing that sufficient funds are made available to the Association on a non-reimbursable basis, to fully fund all of the costs of movement, construction of headquarters building, shops, warehouses, storage, petroleum, oil and lubricants facilities, one residence, utilities, bridge and roads for a new Association Headquarters;

2. That the Association requests that the appropriate committees of the Congress, wherein the legislation is presently pending, schedule hearings upon the pending legislation at the earliest possible time; and

3. That copies of this Resolution be mailed to the Honorable Dennis DeConcini and the Honorable Bob Stump, and further that copies thereof be mailed to the Committee on Energy and National Resources and the Committee on Interior and Insular Affairs.

EXHIBIT "J"

CERTIFICATION

I, Elizabeth L. Johnston, the duly appointed and qualified Secretary of the Yuma County Water Users' Association, hereby certify that the attached and foregoing is a full, true and correct copy of a Resolution unanimously passed and adopted by the Board of Governors of the Yuma County Water Users' Association at the regular meeting held the 6th day of July, 1981.

Elizabeth L. Johnston
Secretary

United States Department of the Inte
BUREAU OF RECLAMATION
~~WATER AND POWER RESOURCES SERVICE~~
WASHINGTON, D.C. 20240

IN REPLY
REFER TO: 420
131.2.97

JUL 6 1981

Memorandum

To: Legislative Counsel

Through: Assistant Secretary, Land and Water Resource

From: Commissioner

Subject: H.R. 3168, A Bill "To authorize the Secretary of the Interior to assist the Yuma County Water Users' Association, Arizona, to relocate the headquarters of such association."

The subject bill would provide funding for, and direct, the Secretary of the Interior to provide a suitable relocation site for the offices of the Yuma County Water Users' Association.

We recommend that the bill be passed with certain modifications.

This bill is identical to S.2843 introduced in the last session of Congress. H.R. 3168 should be amended as follows:

(1) In section 2 strike all of the words between the words "appropriated" and "to carry", and substitute in their place the following: "a sum not to exceed $2,500,000."

(2) Add a new section 3 to read as follows:

> Prior to the expenditure of any of the funds appropriated herein, a contract must be entered into between the United States and the Water Users' Association providing for the Association to lease the property constructed or acquired for the Association's office at a fair market rental rate.

EXHIBIT "K"

(3) A new section 4 should be added to read as follows:

> Following the completing of sections 1, 2, and 3 of this act and the vacating of the Quartermaster's Depot area by the Water Users' Association, the quartermaster's facilities shall be turned over to the city of Yuma, Arizona, for use as a historic recreation site by the Secretary of the Interior under provisions of the Act of June 14, 1926 (43 USC 869).

We previously made similar comments on identical legislation, S. 698, introduced into the current session of Congress.

The person knowledgeable about these comments is Mr. Terence Cooper, telephone number 343-5204.

(Sgd) Robert N. Broadbent

bc: LW
Chief, Division of O&M Technical Services, E&R Center
Regional Director - Boulder City, Nevada

Advancy Copy: Service Branch Office of Legislation
Associate Solicitor - Energy and Resources

LWP:TGCooper:jb:I5204:6/12/81:IBM:B43

YUMA COUNTY WATER USERS' ASSOCIATION
P. O. BOX 708 • N. 2ND AVE. AND CANAL • TELEPHONE 783-8396
YUMA, ARIZONA 85364

August 11, 1981

Re: S-2843 and HR-3168

Thank you for your recent letter concerning the above captioned legislation. We recently received some additional information about these bills which have a significant affect on the position of the Association with regard to the move, and we wanted to send it along to you and make our position completely clear.

Enclosed you will find a copy of a Memorandum which originated in the Bureau of Reclamation and which suggests an amendment to S-2843 and HR-3168. As you can see, the proposed amendment would insert an appropriation of $2,500,000 to fund the move, and would prohibit the use of any of those funds until a contract was entered into between the United States and the Yuma County Water Users' Association providing for the Association to lease the new property at a fair market rental rate.

You will note that the resolution adopted by the Board of Governors of the Association supporting the legislation was expressly conditioned upon funds being made available on a non-reimbursable basis to cover all of the costs of the move. The Board is unanimously opposed to any movement of the Association headquarters which will have an adverse financial effect upon the Association and its members.

It's important to remember that the Association is completely content with its present facilities, and the continued operation of the Project. We occupy our present headquarters under contract with the government and under that arrangement, we are not required to pay rent. The Association certainly is not willing to relinquish its present position if it will thereby be forced to incur a substantial rental liability in the exchange.

EXHIBIT "L"

We initially expressed a willingness to move in an effort to cooperate with agencies that are interested in preserving our present site as a historical monument. As a practical matter, our continued occupancy on the present site is not going to endanger the integrity of the location, since the Association will be preserving all of the facilities that are there throughout the period it continues to occupy the land. Thus, the site is going to be preserved one way or the other, and the only question is whether or not it will be open to the public.

The preservation of sites of historical significance to the United States is something that benefits all of the citizens of the United States and as a result, the Association feels that any costs incurred in such activities should not be the sole responsibility of those who happen to be members of the Yuma County Water Users' Association. Rather, costs such as that should be borne by the public generally, out of the revenues of the United States or, alternatively, out of funds supplied by the agencies seeking to arrange the move.

To summarize, we are absolutely opposed to any amendment to this legislation which would either require the Association to reimburse construction and relocation costs, or would require the Association to begin paying rent at a new location. Your continued efforts in protecting our interests on this issue, as well as others, are appreciated.

Sincerely yours,

YUMA COUNTY WATER USERS' ASSOCIATION

Tommy L. Long

Tommy L. Long
Manager

United States Department of the Interior
BUREAU OF RECLAMATION
~~WATER AND POWER RESOURCES SERVICE~~
WASHINGTON, D.C. 20240

IN REPLY REFER TO: 420
131.2.97

SEP 23 1981

Mr. Tommy L. Long
Manager, Yuma County Water
Users' Association
P.O. Box 708
Yuma, AZ 85364

Dear Mr. Long:

Thank you for your letter of August 11, 1981, expressing your concern about our comments on S-2843 and H.R. 3168, bills "To authorize the Secretary of the Interior to assist the Yuma County Water Users' Association, Arizona, to relocate the headquarters of such association."

When water user associations are provided headquarters facilities as a part of a project, such as yours, the cost of the headquarters facility becomes a part of the project cost and as such is repaid along with other costs. If the repayment contract for the Yuma Project had not been repaid, the cost of providing a new headquarters could be added to the repayment obligation by amending the repayment contract under provision of sections 3 and 7(c) of the Reclamation Project Act of 1939 (43 U.S.C. 485 b and f). Since the Yuma County Water Users' Association has completed the repayment contract, this option was not available to us.

The Office of Management and Budget (OMB) Circular A-25 of September 23, 1959, requires Federal agencies to make a reasonable charge to identifiable individuals or groups who receive a measurable unit or amount of Government service or property from which he (it) derives a special benefit not occurring to the public at large. The charge made should be adequate to recover the full cost to the Federal Government for rendering such service. The Yuma County Water Users' Association is an identifiable special group of individuals. Our proposed amendments to the two bills meet the OMB requirements.

The form that any bill reaches the floor of the Congress and is passed is a result of hearings and compromises. The final form of these two bills has yet to be determined.

If we can be of any further assistance please contact us.

Sincerely yours,

William C Klostermeyer

FOR Robert N. Broadbent
Commissioner

SEP 2 1981

EXHIBIT "M"

Senator **Murkowski**. Our next witness will be Mr. Jones Osborn, a member of the Yuma Park Crossing Council, and a State senator from Arizona.

We look forward to your testimony, and we welcome you to the committee. Good morning.

STATEMENT OF JONES OSBORN, ARIZONA STATE SENATOR, ON BEHALF OF THE YUMA PARK CROSSING COUNCIL

Mr. **Osborn**. Good morning, Mr. Chairman. I am Jones Osborn, a State senator from Arizona, representing Yuma, Ariz., located in the extreme southwest corner of the State along the banks of the Colorado River at what is known as the Yuma Crossing.

First I would like to thank the committee for allowing me the opportunity to appear on your recess day. I appreciate that very deeply.

In the interest of saving time, I am going to keep my remarks very brief, and also I don't want to repeat any of the historic aspects of this matter that Senator DeConcini has already submitted.

I have submitted to the subcommittee secretary a full text of my remarks, plus other informative and supportive documents.

Senator **Murkowski**. Do we have those, Senator? It will be so noted in the record.

Mr. **Osborn**. Thank you, Mr. Chairman. I wish to express my support and the support of my community and State for S. 698 which would fund moving the Yuma County Users' Association from its current location on the historic grounds of a former U.S. Army quartermaster depot to another location already set aside by the U.S. Bureau of Reclamation.

The Yuma Crossing is a unique geologic feature of the present-day city of Yuma that has allowed since prehistory an easy passage across the once broad and swift flowing Colorado River. Because of that, it has occupied a key position in the development of the far West and in the history of this Nation for four centuries. It is the remnant of this proud past that S. 698 is designed to safeguard.

The relocation of the water users from a still standing 120-year-old building of the former quartermasters depot is the last obstacle blocking the full restoration and public enjoyment of the Yuma Crossing and associated sites, historic landmarks designated by the Secretary of the Interior in 1964. It is an area whose history is not only the oldest and most unique in Arizona, but it is one that can rival in importance to our national heritage almost any location in America.

That the water users should be moved to another site is I believe widely accepted. The city of Yuma, the county of Yuma, the Arizona Governor, Bruce Babbitt, the State parks board, the Arizona Historical Society, and the Yuma Crossing Park Council have endorsed the move, and respectfully ask this committee of Congress to approve S. 698.

As a legislator myself, I know in these tight money years our leaders must carefully choose between competing demands for a shrinking pool of money, but this project is one I feel cannot be put off much longer without further serious erosion of a national landmark that stands alone in the early settling of the West, and without seriously impeding further development of the joint city-State park encompassing the depot.

Thank you, Mr. Chairman. I would be glad to respond to any questions that the Chairman might have.

[The prepared statement of Mr. Osborn follows:]

STATEMENT OF JONES OSBORN, ARIZONA STATE SENATOR, ON BEHALF OF THE YUMA PARK CROSSING COUNCIL

Mr. Chairman, Members of the Committee:

I am Jones Osborn, a state senator from Arizona, representing Yuma, Arizona, located in the extreme southwest corner of the state along the bank of the Colorado River at what is known as the Yuma Crossing. I would first like to thank the committee for allowing me the opportunity to appear today. I wish to express my support and the support of my community and state for Senate Bill 698, which would fund moving the Yuma County Water Users Association from its current location on the historic grounds of a former U.S. Army Quartermaster Depot to another location already set aside by the U.S. Bureau of Reclamation.

The Yuma Crossing is a geological quirk of the present day City of Yuma that allowed since pre-history an easy passage across the once broad and swift-flowing Colorado River. Because of that, it has occupied a key position in the development of the Far West and in the history of this nation. It is the remnants of this proud past that Senate Bill 698 is designed to safeguard.

The relocation of the Water Users from the still-standing 120-year-old buildings of the former Quartermaster Depot is the last obstacle blocking the full restoration and public enjoyment of the Yuma Crossing and Associated Sites Historic Landmark, designated by the Secretary of the Interior in 1964. It is an area whose history is not only the oldest and most unique in Arizona, but it is one that can rival in importance to our national heritage almost any location in America.

Spanish Conquistadores were exploring the Yuma Indians' well-used river crossing more than a half-century before the first Englishmen settled into Jamestown in 1607. Indeed, the Spaniards,dominant influence on the cultural and economic development of the West, were well familiar with the Yuma Crossing and its fierce Indian tribes years before the Mayflower floated its load of eager pilgrims into the New World. Nearly 300 years ago, the courageous Father Eusebio Kino extensively explored the Southwest and celestially fixed the first point in the western end of the continent at the Yuma Crossing, to lay the groundwork for all later maps of the West and prove California was not an island.

In 1775, a party of Spaniards that would journey on to establish the city of San Francisco stopped first at the Crossing, and Father Garces later returned to begin its first mission on a bluff overlooking the River. While a bloody Indian uprising in 1781 would destroy the entire settlement, the importance of the Yuma Crossing to the western movement of the continent was firmly fixed.

In the 1820s fur trappers, the famed mountain men, would pass through the Yuma Crossing in their travels. "Old Bill" Williams, Kit Carson and James Ohio Pattie were said to have used the easy fording at which is now Yuma to cross the huge river. And in 1849 the Crossing was the main artery for tens of thousands of hopeful Americans chasing their wildest dreams west to the gold fields of California. That same year a detachment of United States dragoons established Camp Calhoun there, later to become Fort Yuma, and operated a military ferry at the Crossing to help the 49ers rush west in search of gold.

Because of the difficulty of traveling the rugged, sweltering overland desert routes, the army in the mid-1800s decided steam navigation on the Colorado River may hold the key to keeping its soldiers and forts supplied during this period of vigorous westward expansion. Yuma, a small settlement that sprang up on the Arizona side of the Crossing, was to play a vital role in the army's plans for years to come. In 1862 the army built its large Quartermaster Depot near the river in Yuma. Supplies were shipped by ocean freighter from California ports to the mouth of the Colorado River in the Gulf of Baja California. There, they were loaded onto flat-bottom paddlewheel steamboats for the journey upriver to the Yuma Depot. From the large Depot at Yuma, supplies were hauled by mule train overland to a network of forts fanning out into the unsettled West as far as Texas.

It is that Quartermaster Depot, the buildings that still remain standing after 120 years, that the people of Yuma are asking Congress to help save before it is too late. The priceless buildings that are still there -- the Quartermaster's Office, the Reservoir, Corral Building and Warehouse -- are an indispensable part of an overall plan to protect and restore the entire area of the Yuma Crossing into a recreational and historical attraction that will preserve our rich national heritage and entertain and thrill all Americans. Currently much of the area is being used as heavy equipment storage by the Water Users. We hope to change that.

Needless to say the steamboats are gone from the Colorado, victims of the first railroad passage in 1877. But the Crossing lives on. When the trains came, they spanned the river at Yuma. When the growth in automobiles demanded good roads coast-to-coast, U.S. Route 80 crossed the Colorado River at Yuma. In the day of the superhighway, Interstate 8 traffic glides over the Colorado at, yes, the Yuma Crossing. Today the city has grown to become a thriving community of some 60,000 with a strong farm, tourist and military-based economy.

History has left the Yuma Crossing much to cherish. From 1875 until 1909, the Arizona Territorial Prison -- the Yuma "Hell Hole" -- was hunched on a granite hill overlooking the Crossing. Today the prison is a beautifully restored state park and museum attracting nearly 200,000 visitors a year. Across the river, old Fort Yuma has been mostly restored and houses the headquarters of the Quechan Indian nation and still boasts a graceful, Spanish-style mission. The old U.S. Custom House, which received goods shipped to Yuma for the Depot, has been brought back to life through private work and fund raising and is now a museum operated by a nonprofit group in Yuma. The Quartermaster office building and Reservoir (pictures) are owned by the Arizona Parks Department and are partially restored. But the Quartermaster Corral House and Warehouse, along with most of the land at the Depot site, are owned by the Bureau of Reclamation and used for offices and equipment yard by the Water Users (pictures), which operates a large reclamation project outside Yuma.

Further development of the Yuma Crossing area is underway. The City of Yuma and Arizona State Parks Board are jointly planning a 200-acre state-city park from the old Territorial Prison on the east extending nearly two miles west, embracing the Crossing area and the Depot facilities and Custom House. For residents and travelers alike it would be a true gem in the desert. Plans call for the Yuma Crossing Park to feature historical sites that literally opened the far west to modern man, as well as highlight the rich riparian habitat and abundance of river-related wildlife and recreational facilities such a bicycle paths and jogging trails. But to accomplish that grand plan, it is imperative that the Quartermaster Depot be preserved before its adobe buildings slip beyond repair and that the area be returned to as close to its original state as possible. Only after the Water Users are relocated can the park be fully developed and its historic sites restored for the public to appreciate and enjoy. Documents supporting the significance of the area are attached to this testimony.

That the Water Users should be moved to another site is widely accepted. The City of Yuma, Yuma County, Arizona Governor Bruce Babbitt, the State Parks Board, Arizona Historical Society, Yuma Crossing Park Council and even the Water Users have endorsed the move, and respectfully ask this committee and Congress to approve Senate Bill 698.

As a legislator myself I know in these tight money years our leaders must carefully choose between competing demands for a shrinking pool of money. But this project is one I feel cannot be put off much longer without further serious erosion of a national landmark that stands alone in the early settling of the West and without seriously impeding further development of the joint city-state park encompassing the Depot.

Thank you.

Senator MURKOWSKI. Thank you, Senator. What is the current estimated cost of the new building to be moved into?

Mr. OSBORN. Since the site was designated a national historic landmark in 1966, there have been a number of estimates, one as low as $550,000. That was the first one, and a later one that I have seen produced by the Bureau of Reclamation in Yuma is around $950,000. There have been some later estimates, but I believe that one of the things we do need is an up-to-date and accurate estimate on that cost.

Senator MURKOWSKI. I think it would be appropriate to ask the Bureau to submit for the record their estimates. There has been one thrown around here of about $2½ million.

Mr. OSBORN. Yes, Mr. Chairman.

Senator MURKOWSKI. You can get across the country in a Cadillac, or you can get across the country in a Ford. It is all relative if all you are interested in is moving, but can you tell me, and I probably should refer this question to staff, but in many of these historical monuments there is some kind of an entry fee. Some of them are free.

Has there been any consideration or not—I recognize it is certainly not your area of responsibility, but in your obvious interest in this project, you have attended a number of hearings probably conducted by Government personnel associated with the project of a similar nature where I am talking about costs associated with maintaining historical posture of the site, whether it is reasonable to assume there might be some revenue generation from an entrance fee?

Mr. OSBORN. Mr. Chairman, I don't believe that the discussions have proceeded to that point just yet. I do know that the old historic territorial prison which is not far from this site, the Arizona territorial prison, is now a State historic landmark, and the State does charge an admission to that landmark, and I believe it is 25 cents a head.

Senator MURKOWSKI. Do you think the citizens of Yuma would be supportive of some type of an entrance fee if the project were turned into an historic site and the facility moved?

Mr. OSBORN. Mr. Chairman, I think they would be.

Senator MURKOWSKI. Thank you. I think that is perhaps an interesting alternative to generate some funding on this project, and I personally look forward to an opportunity of going down and visiting.

I thank you, Senator, for your testimony this morning, and I do appreciate your consideration of the time restraints. We are going to finish hopefully the hearing this morning.

Mr. OSBORN. Thank you. Let us know when you are coming. We'll roll out the red carpet.

Senator MURKOWSKI. My associate here has me programed for mid-March. Is that right?

Mr. BROWN. Yes.

Senator MURKOWSKI. It is not that far from Phoenix. Thank you, Senator.

Mr. Robert Donaldson, president, board of directors, Belle Fourche Irrigation District, Newell, S. Dak., and Mr. Jim Casey who I have had an opportunity to meet. I think we had lunch together.

We welcome you for your presentation, gentlemen, and appreciate you taking the time to come out here and respond to the concerns of the committee over these projects, and we look forward to your testimony.

Mr. **Donaldson**. Thank you, Mr. Chairman. We appreciate the time you have given us.

Senator **Murkowski**. I see some of your board members.

Mr. **Donaldson**. Yes.

Senator **Murkowski**. If they would like to stand, we will be pleased to acknowledge their presence.

Mr. **Donaldson**. Mr. Williamson.

Senator **Murkowski**. Good morning, Mr. Williamson.

Mr. **Donaldson**. Mr. Adle—he just walked in.

Senator **Murkowski**. Good morning. We welcome your presence at the hearing.

Mr. **Donaldson**. Mr. Nelson.

Senator **Murkowski**. Mr. Nelson, good morning.

Mr. **Donaldson**. And our project manager, Mr. Skjoldal.

Senator **Murkowski**. Good morning. Welcome to the committee. Please proceed if that is the extent of the introduction.

STATEMENT OF ROBERT L. DONALDSON, PRESIDENT, BOARD OF DIRECTORS, BELLE FOURCHE IRRIGATION PROJECT, ACCOMPANIED BY JIM CASEY, DISTRICT COUNSEL

Mr. **Donaldson**. Thank you, Mr. Chairman, and members of the subcommittee. For the record, I am Robert L. Donaldson, president of the board of directors, Belle Fourche Irrigation District, Newell, S. Dak. My testimony represents the official position of the irrigation district as established by its board of directors.

Mr. Chairman, most of the remainder of my statement is a reaffirmation of the material which was presented to the subcommittee at the field hearing on this matter September 11 of last year. The position of the board has not changed. We still support Senator Abdnor's bill, S. 933, and urge your timely approval of it.

As most of my statement is already in the record, I would like to skip to the end and read some new material bearing on developments that have taken place since the field hearings. I will be starting on page 8, at the bottom of page 8.

In closing, Mr. Chairman, I would like to discuss with the subcommittee a matter which has arisen since the time of the field hearings.

Representatives of large private energy firms have appeared in our community and have discussed with individual water users and with the board of directors the possibility of obtaining some of the Belle Fourche water supply for use in their business, perhaps to operate coal slurry pipelines or otherwise use it in the processing of coal to useable energy forms.

At this time, no firm proposals have been presented to the board, and we are not at all certain that such firm proposals will be forthcoming in the near future. Be that as it may, the board believes that such transactions should not be foreclosed in the future, and endorse legislative language that would provide authority to the Secretary of the Interior to adjust existing and future contracts in such manner as to facilitate any such transactions.

We further believe that any proceeds from the conversion of Belle Fourche project water supply to energy or industrial use should be used to offset the cost of construction and rehabilitation that have been accrued by the United States. We do not seek to use any such income as a means of avoiding our legitimate repayment obligations as otherwise spelled out in the bill.

We thank you for holding these hearings and appreciate the opportunity to make these comments to you.

[The prepared statement of Mr. Donaldson follows:]

Statement of Robert L. Donaldson
President, Board of Directors
Belle Fourche Irrigation District
Newell, South Dakota

At

Hearings before the Subcommittee on Water and Power, Committee on Energy and Natural Resources, United States Senate on S. 933 to authorize rehabilitation of the Belle Fourche Irrigation Project, South Dakota, and for other purposes.

February 12, 1982

Mr. Chairman, and Members of the Subcommittee, for the record I am Robert L. Donaldson, President, Board of Directors, Belle Fourche Irrigation District, Newell, South Dakota. My testimony represents the official position of the Irrigation District as established by its Board of Directors.

Mr. Chairman, most of the remainder of my statement is a reaffirmation of the material which was presented to the Subcommittee at the Field Hearings on this matter on September 11 of last year. The position of the Board has not changed-- we still support Senator Abdnor's bill, S. 933 and urge your timely approval of it.

As most of my statement is already in the record, I would like to skip to the end and read some new material bearing on developments that have taken place since the Field Hearings.

The Belle Fourche Irrigation District, through contract with the Secretary of the Interior, operates the Belle Fourche Project, constructed by the Bureau of Reclamation shortly after the turn of the century. The District, also as a matter of contract, has undertaken to repay certain costs of construction incurred in building and rehabilitating the project over the several decades since water was first delivered. I will return to this subject in some detail later in this statement.

Mr. Chairman, the Belle Fourche Project is one of the oldest projects constructed under the Federal Reclamation Act of 1902. It was approved and authorized for construction in 1904; was built during the period 1905 to 1914, with the first public lands opened for entry in 1907 and the first project water delivered in 1908. So, you can see that there are some project facilities that have been in service for almost 75 years, and the entire project has been operational for almost 70 years.

The major facilities of the project consist of a diversion dam on the Belle Fourche River about 2 miles northeast of the City of Belle Fourche; a supply canal extending from this diversion point to Belle Fourche Reservoir, an impoundment created on Owl Creek by Orman Dam. This reservoir has a regulatory capacity of 185,000 acre feet, and discharges water into the North Main and South Main Canals for distribution to the irrigable lands of the District. This is accomplished through a series of unlined laterals and subcanals. In total, the project comprises 94 miles of main canal, 450 miles of open unlined laterals, 225 miles of open drains and 7 miles of covered drains. This system serves about 57,100 acres of land operated by approximately 389 different farmer water users. This includes delivery of water to about 2,400 acres of land situated adjacent to the supply canal between the diversion dam and the storage reservoir.

The Project was originally built as a single purpose irrigation project and only provides fish and wildlife, recreation, and flood control benefits in a minor and incidental way.

The Belle Fourche Project is the backbone of the livestock industry in Butte and surrounding counties of South Dakota. Despite the limited quality of some of the irrigable lands, the project provides the forage and pasture base for sustaining livestock herds during periods of low natural rainfall. Without this hay base our entire economy would be occasionally strapped far worse than has been the case in the past. Accordingly, we believe that there is an almost desperate necessity to put the project back on its feet so to enable it to do the things that a modern, well designed irrigation project is capable of doing.

Let me now discuss our problems and their origins. When this project was built, the work was accomplished with horse drawn equipment and the assumption was evidently made that it would be maintained in the same way. Operating roads and access to major structures was not provided, and to this day is not adequate. This is only one factor of high maintenance cost brought about by crews spending more time getting to the job than it often takes to perform the work after they get there.

A far more significant problem lies in the facilities themselves. They are, simply stated, worn out. This is no condemnation of the original design and construction standards, for at the time they were built, they were of the then "state of the art". But 75 years is a very long time for unreinforced concrete, wood, and metal to survive the elements. Also the project was built before the engineering profession understood that certain adverse reactions between cement and aggregates happened over time to weaken and destroy concrete structures.

Also, our channel prisms have become either silted or eroded to the extent that they are hardly recognizable as canals and laterals. In the Inlet Canal we have suffered such a diminishing of capacity that we are prevented from diverting substantial quantities of water from the Belle Fourche River in times of adequate flow in that stream. In other situations, the absence of lining has contributed to excessive seepage losses from canals and laterals. In other instances,scouring of ditch bottoms has allowed the lateral to penetrate highly pervious materials and there are actually some places where it's almost impossible to get water from one end of the lateral to another.

Finally, the project is almost totally without adequate control mechanisms. We have few, if any,competent measuring devices for determining the extent and timing of water releases, and this makes for much trouble in system management.

We realize that the question can be asked, and will be asked,how did the project facilities get so badly run down? The question can also be asked, if it were not the Irrigation District's responsibility to keep the project in good condition? In response to such questions, I can only say that it didn't happen all at once. This has gradually come on us over almost 75 years. Each year, we devote all of our income, over and above mandatory payments to the United States, to the most pressing maintenance problems such as emergency repairs of key structures, fixing canal breaks, etc. While we are putting out these fires, the rest of the system deteriorates a little more. It is our sincere conviction that this project cannot ever be restored to a satisfactory operating condition through annual assessments of the water users, even if we had a total moratorium on our construction payments over a number of years.

The only thing that will do the job is a general, overall upgrading of the project facilities, both from the point of view of introducing modern design concepts and the use of modern construction materials. In short, the Board of Directors of the Irrigation District supports a program of rehabilitation similar to that described in the draft report of the Bureau of Reclamation dated September, 1979. That report presented a plan at an estimated cost of 31 million dollars to put our project in completely up-to-date shape. Now it may well be that inflation has increased the estimated cost by another 8 to 10 million dollars and by the time we can get it built, it may be even more. In repayment of this amount, the Irrigation District would expect to apply its total revenue resources after defraying the cost of operation and maintenance.

We would expect to be tendered an amendatory repayment contract which would supplant and supercede all of our existing contracts and which would provide for us to pay in accordance with our payment capacity, as determined by the Secretary of the Interior, for a new contract term as specified by the enabling legislation. To the extent that these payments would not return the total federal construction cost, we believe that access to Pick-Sloan Missouri Basin power revenues should be authorized.

In short, Mr. Chairman, what we are asking is that legislation be enacted to put our project on an equal physical and financial footing with new projects being built today by the Bureau of Reclamation. To do any less than a total rehabilitation means that we shall sit by and watch further deterioration of the physical facilities until the point is reached that the project is no longer operable. If this should occur, we would see the economic foundation of much of the northwestern South Dakota livestock enterprise disappear, and along with it, corresponding losses of business and income from the secondary sector in nearby trade centers.

In making this request, we have not lost sight of what is going on in our federal government. We pretty well understand the President's economic program and we support that program. We also understand his determination to balance the federal budget. Some of our people have asked why we are trying so hard to get this legislative authorization when we can never get the project funded. The answer to this question is that we certainly won't get the work funded until it is authorized and we are simply taking the matter one step at a time. We don't really expect funding in the next year or two, but we have confidence in the things that are being undertaken to balance the budget and we have every expectation that our delegation will see to it that the funds are provided in a timely manner.

Mr.Chairman, I think that it is proper for me to point out that we have been trying for several years to get the Bureau of Reclamation interested in our problem here at the Belle Fourche Project. Finally, we were successful in getting the September 1979 draft report prepared, and we appreciate the effort that has gone into identifying the physical needs of the Project.

It has been a disappointment to us, however, that there has been little or no effort on the part of the Bureau to move toward authorization of the needed work. The Bureau people seem to believe that they are limited to another Rehabilitation and Betterment Contract under which about 10 million dollars worth of work would be accomplished. In exchange for this effort, the District would be obligated for 40 years at a level requiring the total resources of the District. This approach is unacceptable to the District for two reasons. First, the computed payment requirement is based on an entire rehabilitation of the Project, yet the Bureau proposes to accomplish less than one third of the needed work. Second, the District is of the strong opinion that any more piecemeal rehabilitation does not address our problems. It would be like putting a shin plaster on a broken leg.

I would now like to talk a little bit about water supply, and the benefits of the rehabilitation from that standpoint. The numbers that I am going to give you are taken from our District records and represent the last three full year average. We have released from storage for irrigation 135,000 acre feet per year, and have delivered to farms 66,000 acre feet per year. This represents a loss in transit of almost one half of the amount released. Compared to modern irrigation projects being built by the Bureau of Reclamation, this is a very poor performance. For design purposes, the Bureau is understood to estimate or project canal and lateral seepage and operations losses at 35 percent of gross diversions. We would expect our rehabilitated project to approach this level of performance. It can thus be seen that the proposed plan has the capability of increasing farm deliveries by about 20,000 acre feet per year. This would certainly qualify our project for a water conservation project, whether the salvaged water was used for increasing the adequacy of the irrigation water supply or whether the water was reserved for instream or in-reservoir use.

The next subject that I would like to discuss briefly is that of operation and maintenance costs. Under our present contract with the Bureau of Reclamation, we are obliged to levy O & M charges against our lands on a uniform basis, irrespective of the land class involved. This year the O & M levy is $8.12 per acre. Over the past three years the average levy for this purpose has been roughly $7.10 per acre. This, we understand, is how the Bureau projects O & M costs for planning purposes, and for our purposes here today, we would make the same assumption, although common sense argues that there will be some continued inflation in this item. The thing that is hard to get a handle on, is how much savings we can expect on O & M after the Project is rehabilitated.

We assume a savings of perhaps 20 percent in such costs, and this allows us to project, before inflation, a significant amount of our present O & M assessment to be available for repayment.

Indeed, we hope that when final studies are completed, we might be able to attain repayment before inflation, of something on the order of 25 to 30 percent of all outstanding construction cost. Compared to other general agriculture irrigation projects in this part of the country, we would be considered outstanding. Moreover, our data does not take into account any indexing of payment capacity on account of increases in price levels, nor does it take into account any additional payment capacities that could be generated by the salvaged water. So we believe that when all of these things are considered, if Congress cannot see its way clear to pass our proposed legislation, it would be about the same as saying that it never intentends to authorize any more projects, for you simply are not going to find a better one.

Inclosing, Mr. Chairman, I would like to discuss with the Subcommittee a matter which has arisen since the time of the Field Hearings. Representatives of large private energy firms have appeared in our community and have discussed with individual water users and with the Board of Directors, the possibility of obtaining some of the Belle Fourche water supply for use in their business; perhaps to operate coal slurry pipelines or otherwise use it in the processing of coal to useable energy forms.

At this time, no firm proposals have been presented to the Board and we are not at all certain that such firm proposals will be forthcoming in the near future. Be that as it may, the Board believes that such transactions should not be foreclosed in the future and endorses legislative language that would provide authority to the Secretary of the Interior to adjust existing and future contracts in such manner as to facilitate any such transactions.

We further believe that any proceeds from the conversion of Belle Fourche Project water supply to energy or industrial use should be used to offset the cost of construction and rehabilitation that have been accrued by the United States and we do not seek to use any such income as a means of avoiding our legitimate repayment obligations as otherwise spelled out in the bill.

We thank you for holding these hearings and appreciate the opportunity to make these comments to you.

Senator MURKOWSKI. Thank you, Mr. Donaldson. In your position, having had an opportunity I assume on numerous occasions as president of the board of directors of the Belle Fourche Irrigation District to have discussions with those who would propose to operate slurry pipelines, what in your opinion might you be looking at as far as revenues generated from this water, in generating say annual revenue?

Mr. CASEY. If I might respond to that, Senator, Secretary Neufeld just spoke of the arrangement consummated by the State government on Oahe, and that sale yields upward of $500 an acre-foot at the reservoir.

Now when you consider that the Belle Fourche project is 100 miles closer to the coalfield and several hundred feet higher in altitude, the water would be positioned a lot better for use in energy from Belle Fourche than in Oahe, so Secretary Neufeld, under the urging from you, said that $500 was a ceiling. We would feel that it might be more likely——

Senator MURKOWSKI. That related to about 9 million annually.

Mr. CASEY. He is talking about $400 per acre-foot which is a minimum; 20,000 acre-feet at $500, which is $10 million up, is the potential value of our water at the project.

Senator MURKOWSKI. And the estimated cost of the project is about $42 million?

Mr. CASEY. About 42 million.

Senator MURKOWSKI. So it is pretty hard to say what the amortization would be because you have got associated costs that are not generally discussed. So you are not looking by any means at a full revenue potential but at a relatively short-time return on the investment if you could look at that kind of revenues being generated, is that correct?

Mr. CASEY. Yes, sir. I think Mr. Donaldson's statement and the language that has been drafted—I don't know really whether it has been put in the record yet, I don't believe it has—recognizes that the district and the water users and the State government and the Secretary and the energy company have a lot of work to do. Nobody expects this to happen very soon, but the potential is there.

Senator MURKOWSKI. Well, speaking of soon, let's talk about that time frame. You are interested in how long it takes things to get going, but you are aware, and so am I, that there is a conversion going on in this country from crude oil to coal for cost purposes, and the movement to coal because of concern over nuclear. What in your opinion is the time frame associated with whether or not this might be a conceivable use of Belle Fourche water?

Mr. CASEY. Well, of course there is nothing to sell there unless this project is authorized and is instrumental in salvaging the 20 thousand acre-feet of water.

Senator MURKOWSKI. It's a chicken and egg situation now. But by the same token, under certain assumptions, you can make a scenario that would suggest that if it is built, then the water would be available, could you interest a user who would commit conditionally to the project becoming a reality?

Mr. CASEY. The board has suggested this in my presence a number of times, the latest one being yesterday. I believe the board feels, Senator, that if the energy industry, really believes that the prospect of this 20,000 acre-feet of water is a valid prospect and that Congress is going to move ahead with authorizing the rehabilitation of the water salvage features, that the overtures would not be long in coming because it is a more feasible resource than Oahe in terms of its location. It could happen in a fairly short time.

Senator **Murkowski**. Has your board had any discussions with any potential energy users?

Mr. **Casey**. The board has had a discussion with one of the partners in the ETSI deal before it was consummated, and they, of course, were focused on that. At the moment, as the statement says, there are no proposals in hand.

Senator **Murkowski**. I would suggest if it is at all possible it would be worthwhile for the record to have a letter, and I don't expect a letter of commitment by any means, but a letter of general interest that you could perhaps obtain from any potential user who might condition his response by suggesting that if the project were authorized and funded, that they would seriously consider it on the basis of the favorable economics or whatever justification. I think it would point out that the return from the project would then substantially be in favor on a cost-benefit ratio, and it might be helpful I would assume to the administration as they weigh their position on the true potential merits. Whether that can be done by your board I don't know, but I would certainly suggest that.

Mr. **Casey**. Well, certainly an effort can be made to do that. There is one other thing, and I think you and Secretary Neufeld have put this in proper perspective, but due regard for the public interest compels me, if I may be recognized further, to say a few things about Commissioner Broadbent's witness statement.

Senator **Murkowski**. Surely.

Mr. **Casey**. First of all, I detected a considerable ambiguity between the written statement and his oral comments which I noticed the Chair picked up with alacrity.

Senator **Murkowski**. You have the last word remember. He is not here. Go ahead.

Mr. **Casey**. Secretary Neufeld also made some very valid points, but the administration's statement taken on its face denigrates a 30 percent payback, and also implies very strongly that the administration has to have a hundred percent payback. The statement then goes on and surprisingly discovers an interest subsidy, I presume for irrigation investment that is a part of the justification for his position, thereby inferring that its policy is a 100 percent payback with interest.

Now whether it is 100 percent payback without interest, or 50 percent payback without interest, based on my familiarity with the irrigation potential in the Western United States, there is not a project, and there has not been a project since World War II that can meet that criterion. Therefore, how an administration can tell me that it is pro-water resource development if we can find some good project, and then draw up the definition of good that is so outlandishly severe that nothing in our lifetime could qualify, bears description.

I have no other comments to make, but I do feel that fairness to the public interest in western water development requires that to be put on your record, sir.

Senator **MURKOWSKI**. I commend you for your directness, and the record will so note. I have no further questions other than to thank you both for your testimony. I think that we have brought out in the record some points that are going to be examined carefully from the standpoint of just what benefits are associated with this project and the public interest of the citizens of South Dakota and the rest of the country.

I again thank you and I want to thank you gentlemen for your welcome when I was privileged to be in your State last summer. I look forward to following these projects and assisting in my capacity as chairman of the Water and Power Subcommittee. Thank you.

Our next witness is Mr. Anders Christensen, WEB Water Development, Aberdeen, S. Dak. Mr. Christensen, we welcome you to the committee this morning, and I invite you to proceed with your testimony.

Mr. **CHRISTENSEN**. Good morning, Senator Murkowski, and thank you for allowing me to speak on behalf of the WEB Rural Water Development Association which is a lay board of farmers and representatives from 51 communities within the WEB project area.

I have submitted for the record a written statement, and I would like to highlight my comments on that statement if I may.

Senator **MURKOWSKI**. Your statement will be so noted in the record. Please proceed.

STATEMENT OF ANDERS CHRISTENSEN, WEB WATER DEVELOPMENT

Mr. **CHRISTENSEN**. I would like to say first of all in regard to the comments offered by the administration this morning, Commissioner Robert Broadbent, I would like to thank him for his support. I would like to thank the Reagan administration for their strong support of the WEB project.

The other item that I would like to mention is that the WEB project is fully prepared to spend the $1.9 million that we are appropriated, and in fact we could have used them over a year ago to start this project along, and the project has been idling, waiting for this appropriation to be made available.

The WEB project is a locally supported project and would serve 30,000 people on 2,700 rural farms and 51 communities, and 9 counties of north central Dakota. The purpose of the project is to provide clean, dependable, affordable water by way of underground pipeline system, utilizing the Oahe Reservoir on the Missouri River as its source.

Additionally, the WEB project is now designed to provide offpeak water to an additional 25,000 people in the city of Aberdeen, which is one of the most major cities of that area.

The WEB board supports the purpose and the intent of S. 1553 to reauthorize the WEB project and provide for its continuing development and construction. The passage and enactment of this bill means that WEB, study authorizations for CENDAK and Garrison extension, specific power benefits for the Grass Rope unit, and other benefits would be developed in lieu of the Oahe and Pollock-Herreid irrigation unit.

In the case of WEB, it is our understanding that this bill would direct the Secretary of Interior to proceed immediately with the development of the project under the terms and conditions of the Consolidated Rural Farm Development Act, and such rules and regulations as may be made pursuant to the act.

The bill also allows the Secretary of Interior to enter into agreement with the Secretary of Agriculture for the purposes of the bill. The WEB board believes that the Farmers Home Administration and the Department of Agriculture involvement and oversight with the project is necessary and essential to efficiently carry out the purpose and the intent of the act which is to construct and develop the project to provide an improved domestic drinking water system to the people of that area.

In the past, the Federal Government's role to major water resource development in South Dakota was mainly limited to the development of the Oahe irrigation project, but seemingly unresolvable problems with the old Oahe plan caused the project to lose support of its local sponsors who have called for its deauthorization over the past 4 years.

The passage of the language in Senate bill 1553 providing for the reauthorization of the WEB project would allow the Federal Government to reestablish a Federal program that the Department of Interior has been on record supporting since 1980. The Reagan administration has supported the bill as evidenced by Budget Director Stockman's letter of September 8, 1981, to Congressman Roberts, the supportive position of the Department of Interior expressed by the Bureau of Reclamation Commissioner, Robert Broadbent, today and at House Agricultural Committee hearings on September 9, and also on October 22, 1981.

The WEB project has also been supported by the entire South Dakota congressional delegation, has received the support of Gov. William Janklow, the Oahe Subdistrict Board, and other local groups and entities.

I believe that the foundation of WEB's popularity and success has been the local support shown by the WEB people who have demonstrated their need for improved domestic water supply system. The WEB board has collected in excess of $800,000 in fees, part of which has been used to conduct engineering studies, and pay for development costs. Of that amount, $650,000 was collected last year, and the final water use contract signed by 2,700 rural farms based on the final engineering design was completed.

The project is fully engineered and is ready for construction. The WEB board recently took action, Mr. Chairman, committing $300,000 of that $650,000 that they collected for this year's project for construction on an up-front basis. This was also matched by the Oahe Conservancy Subdistrict Board when the WEB board requested that they also provide the money that they had committed in the grant for relief to come in on the tail end of the project that was committed and requested and would come in on the front end of the project.

Additionally, the State of South Dakota was asked to provide $300,000 as part of a $900,000 package in up-front money to match the $1.9 million that the Federal Government may provide or is available, and the bill has been introduced into the legislature which received the support of the Appropriations Committee in the legislature. It was reported out with a due past recommendation, and I believe will be passed, and this would provide our State to this project for this year approximately 30 percent of the project cost for this initial phase 1 construction.

We feel that the last needed ingredient to this package since this $900,000 has been put up is the release of the $1.9 million, and we support Senate bill 1553 because it would release that money. It would provide that this project could now rightly be able to start construction, and it is based on that that I would urge you, Senator Murkowski, the Senate, and the Congress to give favorable and quick consideration in the face of this bill.

Thank you.

[The prepared statement of Mr. Christensen follows:]

ENERGY AND NATURAL RESOURCES COMMITTEE
SUB-COMMITTEE ON WATER-POWER
Senator Frank Murkowski - Chairman
Hearing on S 1553
February 12, 1982

Statement; made by Anders Christensen - WEB staff in behalf of the WEB WATER DEVELOPMENT ASSOCIATION, Incorporated sponsors for the WEB Rural Water Development Project.

I would like to thank the Water and Power Sub-committee for offering me this opportunity to speak in behalf of the WEB Rural Water Development Project which is locally supported by 30,000 people, on 2700 rural farms, and 51 communities, in nine (9) counties of North Central South Dakota. The purpose of the WEB project is to provide clean, dependable, potable water supplies by way of an underground pipeline system utilizing the Oahe Reservoir, on the Missouri River as a source. Additionally - the WEB project, as now designed, could provide off-peak water to an additional 25,000 people in the City of Aberdeen.

The WEB Board supports the purpose and intent of SB 1553 to reauthorize the WEB project and provide for its continuing development and construction. The passage and enactment of this bill means that WEB, study authorizations for CENDAK and Garrison Extension, specific power benefits for the Grass Rope Unit, and other benefits would be developed in lieu of the Oahe, and Pollock-Herreid Irrigation Projects.

In the case of WEB, it is our understanding, this bill would direct the Secretary of Interior to proceed immediately with the development of the project under the terms and conditions of the Consolidated Rural Farm Development Act and such rules and regulations made pursuant to that Act. The bill also allows the Secretary of Interior to enter into agreements with the Secretary of Agriculture to carry out the purposes of the bill. WEB believes that Farmers Home Administration - Department of Agriculture involvement and administration of the project is necessary and essential to effeciently carry out the purpose and the intent of this Act - that is, to construct and develop the WEB project to provide improved domestic drinking water to 30,000 people in the State.

In the past, the Federal Government's role to major water resource development in South Dakota was mainly limited to the development of the Oahe Irrigation Project. Seemingly unresolvable problems with the Old Oahe Plan caused the project to lose support of its local sponsors who have called for its deauthorization over the past four years.

The passage of language in SB 1553 providing for the reauthorization of the WEB project would allow the Federal government to reestablish a Federal program that the Department of Interior has been on record supporting since 1980.

The WEB reauthorization portion of the bill has the support of the Reagan Administration as evidenced by Budget Director David Stockman's letter of September 8, 1981, to Congressman Roberts, and the supportive position of the Department of Interior expressed by Bureau of Reclamation Commissioner, Robert Broadbent, before the House Agriculture and Conservation Credit and Rural Development Sub-committee on September 9, 1981, and the House Sub-committee on Water and Power on October 22, 1981. The WEB project's reauthorization is also supported by the entire South Dakota Congressional Delegation, Governor William Janklow, the entire Oahe Sub-district Board, and other local groups and entities.

The foundation of WEB's popularity and success has been the keen local support shown by the people the project would benefit who have demonstrated their need for improved domestic water supplies. The WEB Board has collected in excess of $800,000 in fees, part of which has been used to conduct engineering studies and pay for development costs. Of that amount $650,000 was collected last year and final water use contracts signed from 2700 rural farms based on the final engineering design. The project is fully engineered and is ready for construction. The WEB Board recently took action committing $300,000 of those funds toward 1982 construction.

The WEB Board also sought commitments from the Oahe Conservancy Sub-district Board who are committing $300,000 immediately for 1982 construction from a $3.1 million commitment earmarked for the project.

Additionally, WEB believes that the State of South Dakota will respond to the WEB Board's request to provide $300,000 of up-front money to match federal funds already appropriated to the project. A WEB bill is expected to pass the South Dakota Legislature and is strongly supported by Governor Janklow. This bill would appropriate the money. The $900,000, first year, local-state up-front money "package" amounts to 30% of the first construction phase. The last needed ingredient of the WEB funding package is for Congress to reauthorize the project and release $1.9 million of already appropriated funds.

We believe the WEB project has met the Reagan Administration's guidelines for water projects requiring a 25% up-front match. State, Oahe Sub-district, and local entities remain strongly commited to seeing the project constructed. WEB would therefore, urge this committee and Congress to give quick and favorable consideration to Senate Bill 1553. Thank you.

Senator MURKOWSKI. Mr. Christensen, do you stand to lose a year if you can't proceed during the period when you have low water in the reservoir? Will you have to wait another year for low water, until winter before you put in the intake works or whatever it is?

Mr. CHRISTENSEN. The Missouri River Reservoir is quite low, and that would result in some savings during construction because the low water levels do permit leisurely construction, but really the problem that we face this year is if we are going to keep this project on a time schedule that would allow us to start construction during the time, for example—this weather is very nice right here, but in South Dakota it was below zero when I left. It is equally as cold as it is warm.

Senator MURKOWSKI. We have a little of that in Alaska, too. There is a time period prior to breakup when you get some warm temperatures, and I was curious to know whether you basically lost a year for the project or as you have indicated not necessarily. Is it just cheaper?

Mr. CHRISTENSEN. We lost a year from the time that the project was authorized, and we are afraid of losing another year. One of the prime reasons for asking the subdistrict and State and our own membership to advance and put up their own up-front money was they are expecting to commit to the construction of this project prior to going ahead, Congress completing the action on this bill, so that we can be in line this summer to be able to build something.

There is very long leadtimes on the type of construction that we are talking about. For example, the borings at that type of thing need to be done in order to complete the intake which was one of the features that would be looked at, one constructed this next summer, and to provide for that we are going to have to begin now.

Senator MURKOWSKI. Thank you for clarifying that, Mr. Christensen. We appreciate your testimony, and we wish you a good day.

Mr. CHRISTENSEN. Thank you, Senator.

Senator MURKOWSKI. Our next witness will be Mr. Curt Hoyn, manager, Oahe Conservancy Subdistrict, Aberdeen, S. Dak.

Senator ABDNOR. Senator, could I interrupt for one second?

Senator MURKOWSKI. You already have.

Senator ABDNOR. As I told you in my testimony, this had unanimous backing of all the delegation, and I would just like to—this is Congressman Daschle's statement that he would like to include in the record.

Senator MURKOWSKI. The Congressman's statement will be noted in the record, and we thank you, Senator.

[The prepared statement of Congressman Daschle follows:]

TOM DASCHLE
South Dakota

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11 February 1982

Senator Frank Murkowski
Chairman
Subcommittee on Water and Power
Senate Committee on Energy and Natural Resources
3106 Dirksen Senate Office Building

Dear Senator Murkowski:

Enclosed please find a copy of my comments on S.933, and S.1553, which form part of the subject matter for hearings before your subcommittee on February 12, 1982. I regret that prior commitments in South Dakota preclude me from testifying in person before the subcommittee, and appreciate the opportunity to have my testimony included in the hearing report.

I am very appreciative of your consideration of these bills, and respectfully urge that they be given favorable dispositions.

Sincerely,

Tom

Thomas A. Daschle
Member of Congress

TOM DASCHLE
SOUTH DAKOTA

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STATEMENT OF CONGRESSMAN THOMAS A. DASCHLE BEFORE THE SENATE ENERGY AND NATURAL RESOURCES SUBCOMMITTEE ON WATER AND POWER.

February 12, 1982

I would first like to commend this subcommittee for holding these hearings, and allowing me to enter this testimony into the hearing record.

Today this subcommittee will hear testimony on S.933, a bill to reauthorize the rehabilitation of the Belle Fourche Irrigation Project, and S.1553, a bill to reauthorize the WEB Rural Water System, provide for studies of other South Dakota water projects, and to extend low cost Missouri Basin pumping power to selected South Dakota projects. I am a sponsor of companion pieces of legislation in the House of Representatives, HR 3164 and HR 4347, respectively.

There is no doubt that water development will play a key role in the economic future of South Dakota. The irrigation and rural water use projects that these bills will authorize will provide a sound economic base for the state's agricultural sector, which forms the backbone of the state's economy. While everyone in the state has long realized this, the perhaps inevitable controversy which surrounds the issue of water development in the West has, in the past, caused division within the state, preventing positive action.

The bills you are discussing today, however, are fully and enthusiastically supported by the entire South Dakota Congressional delegation, the State Legislature, the Governor's office, and the overwhelming majority of South dakota private and public organizations interested in water development.

While all of us realize that a time of budgetary constraint may not be the best possible time to speak of authorizing water development projects, there is another aspect of South Dakota's situation which must be taken into account when considering this legislation. This is the fact that South Dakota, in order to provide flood control, navigation, and hydro-electric power to downstream states, sacrificed 500,000 acres of prime farm land for the construction of a series of main stem dams on the Missouri River. At the time of this sacrifice, the federal government pledged to compensate the state for its losses by providing assistance in water development to the state.

South Dakota has waited patiently for the federal government to honor its pledge. It has not yet done so. The bills you are addressing today are in no way a complete repayment to my state for the permanent flooding of over a half-million acres of prime South Dakota farm land for the benefit of other states. But it is a start in the right direction. I respectfully urge a favorable disposition on these bills.

Senator MURKOWSKI. Mr. Hoyn, welcome to the committee. We look forward to your testimony. Please proceed.

STATEMENT OF CURT HOYN, MANAGER, OAHE CONSERVANCY SUBDISTRICT

Mr. HOYN. Thank you, Mr. Chairman. The temperature here is certainly more agreeable than when we last saw you and your staff in South Dakota, and I just want to say, as everyone else has, that your patience and willingness to hear us out was appreciated out there. We have a very rough and tumble group of people that live there. You have to be to live there.

Senator MURKOWSKI. I felt very much at home.

Mr. HOYN. I'm sure you did, but it did renew I think the faith in the congressional process, and we appreciate your willingness to come there and to hear our people out, as varied as they were.

Senator MURKOWSKI. I can't tell you how much I enjoyed it, and I particularly appreciated the opportunity with Senator Abdnor and Senator Pressler and your Governor to participate in that very spirited hearing. Thank you for your comments. Please proceed.

Mr. HOYN. All of the projects and studies that are included in Senate bill 1553 are located within our water district except for one project, the Grass Rope irrigation project, which is in our neighboring Indian reservation. We are the primary contracting entity for the Oahe unit. All the projects and studies, well, the subdistrict is in full support of this bill as amended.

We are in full support of this bill as amended save for one small additional amendment which we feel needs to be made. The bill does appear to be in the best interests of the State. It is the best alternative for resolving the controversy surrounding the Oahe unit and moving on with responsible water resource development which South Dakota needs and deserves.

Several improvements and changes have been made in the bill since you took testimony in South Dakota in September. The one additional change which does need to be made is in section 3 of the bill. As presently written, it merely places a moratorium on construction of certain Oahe unit features. The express intent of this bill, Senate bill 1553, as explained to us by the congressional delegation is to assure that the old Oahe project plan is not constructed, but to leave the door open for some other alternative options of development which are available in the city.

We feel section 3 of the bill, therefore, should be amended accordingly, and it should read that the features listed are hereby deleted from the Oahe unit authorization, Public Law 90-453, 82 Stat. 624, as adopted by Congress August 3, 1968. That would include all the features on page 5 of Mr. Nassick's September 15 testimony, with the exception of the Blunt Reservoir.

It is our understanding that all four members of South Dakota's congressional delegation would support this addition to the bill.

As for those who call all the water projects pork barrel, I would urge them to consider that this country relies on the rural West and Midwest for the food and fiber that we all so readily take for granted. The people who live in those areas of the States in South Dakota, endure inconvenience, hardship, and hard work to feed this country and the world. Often they do it at a lower income than others enjoy, and frankly, much of that area has merely become in my opinion a food colony for the rest of the country.

We have a system in this country which fosters and maintains a cheap food policy. Absent from a fair price, a fair parity price for our farm production in South Dakota, we are going to need Federal assistance in meeting water needs for projects like WEB and others. If Congress were able to help us obtain $7 a bushel for wheat, we could probably do it ourselves, but the reality is that that is not the situation. I feel it is in the national interest. It is not a handout, the WEB project. All the interests in South Dakota, including the State, the subdistrict, and local users, have helped put up up-front funds to match the Federal commitment. The Oahe subdistrict alone has committed $3.1 million in grant funds, as upfront grant funding for the WEB project. That is the maximum commitment that we can make as a local taxing entity, but we feel that strongly about the construction of the WEB project, and the need that it represents in our area.

Thank you very much.

Senator MURKOWSKI. There is evidently a difference of opinion, Mr. Hoyn, in the administration's position on section 3 and your own. You want full deletion, and they suggest a moratorium, is that correct?

Mr. HOYN. Right. They did expand their position to at least listing features.

Senator MURKOWSKI. Well, I am quoting, "* * * will be preferable to placing a full moratorium on the Oahe Unit construction * * * features is authorized." They granted these clarifications.

Have you had an opportunity to try and resolve this with the administration's people, the Commissioner, or is it nonresolvable in your opinion?

Mr. HOYN. I do not think it is unresolvable. It has been my impression, my understanding that the South Dakota congressional delegation has talked at length with the Commissioner and that the listing of features has been at least agree to with the exception of Blunt Reservoir. That is on our list and not on theirs.

I think the only thing that remains to be resolved is whether or not we are placing a moratorium on those features or removing them from the authorization. We would like to remove them for two reasons. One, because in order to reach a compromise, an acceptable compromise, in our State among all the different interests, the people who do not want to see the old Oahe project built have to see that language in the bill, and all it does, it does not prevent any future development of CENDAK or other projects that would be studied in this bill, but what it does do is assure that the irrigation in Brown and Spink Counties would not be constructed in the future, and we think it is consistent with the position of all interests in the State.

Senator MURKOWSKI. Can you address just very briefly for the record why in your opinion at least the administration will not or has been reluctant to acquiesce to deletion and prefers moratorium?

Mr. HOYN. My impression has been that they are not strident on the issue. The advice they always give us is that Congress can do anything they wish, and this is their observation.

Senator MURKOWSKI. That doesn't mean that Congress does it right.

Mr. HOYN. Well, they are telling us that that issue would have to be resolved here, and I guess what we are saying is the acceptable compromise in the State would have to have those features deleted if it is at all legally or practically possible.

Senator MURKOWSKI. I would be inclined to suggest in my limited knowledge—I haven't been around here very long—it would be in the best interests of those that are knowledgeable, not inferring that this committee is not knowledgeable by any means, but there is certainly a degree of familiarity that is evidenced in the witnesses and those people charged with the responsibility of the Bureau of Reclamation, and if they could get together, and when I say they, I mean both parties, to resolve this, I think it would be more directly responsive to the interests than the committee resolving it. I would just note that for the record and urge that such a meeting take place on this particular point.

It is not a major one, but it is one of some difference, and it helps sometimes if you go in a room with the idea of resolving your differences and not coming out until you do one of two things. Thank you, Mr. Hoyn, for your testimony. I wish you a good day.

Mr. HOYN. Thank you.

Senator MURKOWSKI. The last witness is Mr. J. W. Pat O'Meara, executive vice president of the National Water Resources Association, Washington, D.C.

I might add for those of you who don't know that Mr. O'Meara did travel to Alaska via water and as a consequence is another expert on Alaska.

With that, I would ask you to proceed with your testimony, and say good morning.

Mr. O'Meara. Good morning, Senator. It is my pleasure to appear before the subcommittee today on behalf of the National Water Resources Association.

Senator, I realize I am the witness you have been waiting to hear in that I am the last one on the list, and I will conclude your long morning.

Senator Murkowski. That is because you were placed there by your friend Mr. Brown here. I don't know whether that is done on purpose or by accident.

STATEMENT OF J. W. "PAT" O'MEARA, EXECUTIVE VICE PRESIDENT, NATIONAL WATER RESOURCES ASSOCIATION

Mr. O'Meara. I appear today to advise the subcommittee that the National Water Resources Association endorses and supports S. 933, S. 1409, S. 698, and S. 1828.

Senator, through an oversight on my part I did not realize that S. 1553 was scheduled for today's hearing.

Senator Murkowski. Mr. Brown didn't notify you?

Mr. O'Meara. Well, I think it is my oversight.

Senator Murkowski. Mr. Brown is pleased to hear that I'm sure.

Mr. O'Meara. My lack of comment on that bill should not be interpreted as opposition to it, and since the record will remain open for 2 weeks, I would like to submit our comments on that bill. The rehabilitation of the Belle Fourche project in South Dakota, and the modifications to the Buffalo Bill Dam and Reservoir in Wyoming are long overdue. The unusual circumstances surrounding the facility presently used by the Yuma County Water Users' Association in Arizona as described in detail by Senator DeConcini and others clearly justify the action proposed by the bill.

In supporting S. 1628 to amend the Emergency Fund Act I wish to suggest an amendment for the consideration of the subcommittee. That is that S. 1628 be amended to include the facilities constructed under the provisions of the Small Reclamation Projects Act of July 4, 1956, and the Distribution System Act of August 6, 1956. It only seems fair and proper that the reclamation facilities constructed under the provisions of these two acts be considered for equal treatment under the Emergency Fund Act.

If they are not included at this time, it will probably be a long time before the Congress would address that question again.

I would like to briefly comment further on the reauthorization of the Belle Fourche irrigation project as a unit of the Pick-Sloan Missouri Basin program.

While it is not one of the projects authorized under the program in the Flood Control Act of 1944, the fact is that none of the projects authorized for South Dakota in the act have been developed, and it does seem reasonable then to think that the Belle Fourche Project might be submitted for a portion of the previous authorized but undeveloped irrigation which was promised to that State or to the State of South Dakota under the Missouri River Basin program.

As has been pointed out earlier today, South Dakota has made enormous contribution of its finest river bottom land to assure the success of the Flood Control Act of 1944, and for 25 years or more they have lost the productivity of that rich bottom land, the tax revenues that would have resulted from there, and it is clear that that sacrifice on the part of South Dakota is one of the reasons why Secretary Neufeld reported to you today that South Dakota is one of the poorest States in the Nation.

Secretary Watt has acknowledged the Federal Government's unfulfilled commitment to South Dakota and passage of S. 933 would begin to put that commitment into action.

On the other hand, I suspect that the Commissioner's statement here today was obviously dictated by OMB, and would tend to deny that there is a commitment to South Dakota.

I did not have advance notice of the administration's position on the Belle Fourche Project, and frankly, it came as a surprise to me. In the Commissioner's statement he said he did not think we should require power customers of the Pick-Sloan Missouri Basin program to repay 70 percent or more of the rehabilitation and betterment cost. In the history of the program, power revenues have been the cash register of the development program, and this has been, the success of the program depends on those power revenues, and he said further in his conclusion that the program would have to be financed through tax revenues and/or by public debt instruments.

That seems to imply that water resource projects are the reason we have a $90 billion deficit, and I would like to refute that kind of an argument. I would rather think in terms that the $42 million that we are asking for Belle Fourche be focused under the general tax revenues, become not a part of the deficit. If we want to talk about deficit, compare our $42 to the $55 million that you are now asked to give to San Salvador or the $300 million to give to Israel, or the $10 billion that has gone into the Metro system right here with no repayment at all.

I was surprised a week ago by the administration when I testified on the House side and they asked for cost sharing on safety of dams, so it is not our association's position to oppose the administration. We try and march in consort with what they are trying to develop, and so I would say my comments today are not in opposition to what they have to say but we are just hoping to give it a little better direction.

[The prepared statement of Mr. O'Meara follows:]

Statement of
J. W. "Pat" O'Meara
Executive Vice President
National Water Resources Association
before the
Subcommittee on Water and Power Resources
of the
Energy and Natural Resources Committee
United States Senate
Washington, D.C.
February 12, 1982

Mr. Chairman and Members of the Subcommittee:

It is my pleasure to appear before the Subcommittee today on behalf of the National Water Resources Association. NWRA is a confederation of the State water user associations of the 17 Reclamation States and Hawaii. This year, 1982, we celebrate our Golden Jubilee. Over that 50 year period, NWRA has established a long record of vigorously advocating the development and wise use of water resources, including our support of many worthwhile Federal Reclamation projects.

I appear today to advise the Subcommittee that NWRA endorses and supports S. 933, S. 1409, S. 698, and S. 1628. Our studies of these bills indicate they are worthy of support. The rehabilitation of the Belle Fourche Project in South Dakota and the modifications to the Buffalo Bill Dam and Reservoir in Wyoming are long overdue. The unusual circumstances surrounding the facilities presently used by the Yuma County Water Users Association in Arizona seem to justify the action proposed by the bill, that is, that the Secretary of the Interior be authorized to provide the necessary office space as a fair exchange for the quarters now occupied by the Yuma County Water Users Association.

In supporting S. 1628 to amend the Emergency Fund Act, I wish to suggest an amendment for the consideration of the Subcommittee. The Secretary of the Interior is presently empowered to utilize this emergency fund to assure the continuous operation of Bureau of Reclamation irrigation and power systems. S. 1628 would extend the authority to "all projects and project facilities governed by the Federal Reclamation Act (act of June 17, 1902, stat. 388). In other words, it will extend the present authorization to allow the Secretary to assure the continuous operation of Bureau of Reclamation facilities providing municipal and industrial water. This we support.

We do request, however, that S. 1628 be amended to include the facilities constructed under the provision of the Small Reclamation Project Act of July 4, 1956, as amended (43 U.S.C. 421a-421d) or the Distribution System Act of August 6, 1956, as amended (43 U.S.C. 422a-422k). It only seems fair and proper that the Reclamation facilities constructed under the provisions of these two acts be considered for equal treatment under the Emergency Fund Act.

We recognize, in the day-to-day operation of the Senate, that the bills before the Subcommittee today may not be very significant, but let me assure you that they are very, very important to the people of South Dakota, Wyoming, and Arizona, and S. 1628 is as necessary to the Reclamation West as a fire department is to a city--it provides for critical assistance in an emergency.

Thank you for your time and attention.

Senator MURKOWSKI. Thank you, Mr. O'Meara. I wonder if in your analysis of what is happening we are seeing the introduction of legislation that would enable interstate slurry piplines. In the application of using water from Belle Fourche. Do you receive in the foreseeable future the marketing of that water a reasonable likelihood and the offsetting revenues associated thereof?

Mr. O'MEARA. It is my observation if we are going to meet the energy goals of this Nation and rely heavily on the coal deposits of Wyoming and some of the other western states, we are going to need to put ourselves in a position to move absolutely every ton of coal we can probably move on the railroads, and commit ourselves to a full program of coal slurry pipeline development, because the enormous volumes and tonnage of coal that is going to have to be moved to various parts of the country to meet those energy demands is enormous. It defies imagination, and we have the one situation now in South Dakota where they have finally some revenue coming in for their water development through the ETSI pipeline, but the concern with some of the other States downstream was not from the ETSI pipeline and the 20,000 acre-feet.

Actually, Senator, I believe if you took the 20,000 acre-feet out of the Oahe Reservoir on one day instead of one year, and there was a little breeze blowing that day, you couldn't tell they took any water out of that reservoir at all. It is enormous, and that is what the people of South Dakota are complaining about. They have given up so much of their land to create that enormous reservoir that 20,000 acre-feet is not even a measurable quantity, and as has been testified, Belle Fourche would give an even better source of water for piplines, and so if we want energy self-sufficiency in this country, the pipelines that are coming in from Alaska, these slurry pipelines and increased tonnage on the railroads are going to be an absolute necessity, and you need to take every step we possibly can to assure that for the future.

Senator MURKOWSKI. Mr. O'Meara, do you feel comfortable that the authority vested in the State Governor and the State administration with regard to a determination of the use of water in interstate slurry piplines provides adequate safeguards for that particular State?

Mr. O'MEARA. Well, I can give you my view. It hasn't been tested in any court yet, and I suspect some place down the line there will be some court cases on that, but it is in concert with the administration's policy now that the water belongs to the States, and directions have gone out to the Bureau of Reclamation and to the Corps of Engineers that they get in line at the State office where the State engineer or whatever the office is in the various States has control of the body, and make an application for the use of the water just like any other customer would, so this indicates to me that South Dakota indeed for water that is stored in South Dakota has the right to sell that water.

Senator MURKOWSKI. I thank you, Mr. O'Meara, for your excellent testimony, and wish you a good day.

In conclusion, I would like to remind those of you who have participated and any others that the hearing record will remain open for 2 weeks. I want to thank those of you who testified this morning and those of you who came a great distance to have your submission become part of the record. I particularly want to thank you for accommodating the Chair with regard to the time frame that these hearings were held under. We had hoped to get finished prior to noon, and we evidently have done so. I wish you all I for next Monday a Happy Washington's Birthday.

With that, the committee hearing is adjourned.

[Whereupon, at 11:45 a.m., the hearing was adjourned.]

APPENDIX

ADDITIONAL MATERIAL SUBMITTED FOR THE RECORD

ARIZONA
STATE
PARKS

1688 WEST ADAMS STREET
PHOENIX, ARIZONA 85007
TELEPHONE 602-255-4174

BRUCE BABBITT
GOVERNOR

STATE PARKS
BOARD MEMBERS

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YUMA

JOE T. FALLINI
STATE LAND COMMISSIONER

MICHAEL A. RAMNES
DIRECTOR

ROLAND H. SHARER
DEPUTY DIRECTOR

February 23, 1982

The Honorable Frank Nurkowski
Chairman, Subcommittee on Water & Power
Committee on Energy & Natural Resources
3106 Dirksen Building
Washington, D.C. 20510

Re: Senate Bill ~~3~~698

ATTENTION: Russ Brown

Dear Senator Nurkowski:

The Arizona State Parks Board has been involved for several years in the development of plans for the establishment of a major recreational and historic park in the Yuma Crossing Area which is a National Historic Landmark. The primary focus of the park will be the interpretation of the historic Quartermaster Depot Complex, most of which is owned by the Bureau of Reclamation and leased to the Yuma County Water Users Association. Relocation of the Yuma County Water Users Association and the subsequent transfer of the buildings to the State of Arizona, as authorized in Senate Bill ~~3~~698, directly impacts the preservation, development and interpretation of the proposed Yuma Crossing Park.

At the 12 February 1982 subcommittee hearing, Senate Bill ~~3~~698 was presented to address this issue. We urge review of the statement made by the Bureau of Reclamation that relocation of the Water Users Association was not an allowable cost and not of national concern. Designation as a National Historic Landmark provides the greatest means of recognition of historic properties in the United States and is limited to sites of national significance. The federal government has stated its commitment to protection of historic properties through the Historic Sites Act of 1935, the National Historic Preservation Act of 1966 and the Archaeological & Historic Preservation Act of 1974. Further, directives outlining federal agencies' responsibilities were mandated through Executive Order 11593 (5-13-1971) and the Amendments Act of 1981 to the National Historic Preservation Act. It is our concern that this project is properly addressed for its national significance and that federal agencies comply with appropriate mandates, rules and regulations.

On behalf of the Arizona State Parks Board, I wish to restate our interest in the favorable consideration of Senate Bill ~~3~~698.

Sincerely,

Michael A Ramnes

MICHAEL A. RAMNES
State Parks Director

MAR:oml
cc: Senator Barry Goldwater
Senator Dennis DeConcini
Representative John J. Rhodes
Representative Morris K. Udall
Representative Bob Stump
Representative Eldon Rudd

UNITED FAMILY FARMERS
Box 523
Aberdeen, South Dakota 57401

February 25, 1982

Honorable Frank Murkowski
Chairman
Water & Power Subcommittee
Committee on Energy & Natural Resources
U.S. Senate
Washington, D.C. 20510

Dear Senator Murkowski: RE: Hearing S-1553

We are writing to you regarding S-1553/HR-4347 dealing with South Dakota water development issues currently being considered by the Subcommittee and request that this statement be included in the hearing record.

United Family Farmers was organized in 1973 and represents approximately a thousand SD farm families in the vacinity of the proposed Oahe Irrigation Unit. Generally we support the development of the WEB Water Development Project, and we favor deauthorization of the Oahe Unit. Several ammendments to the original legislation have been offered since S-1553 was first heard by the Subcommittee last fall. We would like to comment on the revised legislation.

Section 3(b) This section is much improved over the original bill, by specifying that several features of the originally authorized Oahe Unit shall not be constructed. Further, we understand that the SD Delegation have formally requested that this section of the bill be ammended to read that these features ..."are no longer authorized and shall not be constructed"... This language is very important to clarify the meaning and intent of the legislation.

The bill, however, is not fully adequate in dealing with the Oahe issue and laying aside the controversy for the people of SD since it leaves features of the original Oahe plan authorized, namely the Pierre Canal and Blunt Reservoir. The concerns among citizens of the Blunt area regarding the social, economic and environmental impacts of these features are well documented in the hearing record. We feel it would not be good policy to preserve the construction authorization of controversial features which would have no purpose. United Family Farmers represents people with interests in all features and aspects of the Oahe Unit, and would contimue to oppose any anticipated developme of the Pierre Canal and Blunt Reservoir which remain authorized for construction

Therefore we would urge the Subcommittee to consider the position represented by HR 4172 proposed by Representative Bedell, to deauthorize the Oahe Unit. In any event, we hope the Subcommittee would contrast the merits of both pieces of legislation in deciding the Oahe issue.

Section 2(a)(1) This section intends to authorize feasibility study of the CENDAK irrigation proposal. UFF opposes this action, and refer you to the hearing record. Briefly, several previous studies by the Bureau of Reclamation of the area proposed for irrigation service by the CENDAK plan have stated that a large majority of the soils are unsuitable for irrigation. A recently released economic analysis by the Bureau of Reclamation of the CENDAK Irrigation Project (November, 1981) (copy enclosed) shows that the projects benefits would be less than the costs.

We remain further opposed to the CENDAK feasibility study since the Bureau intends to assume that the installation of necessary drainage facilities would be delayed. Deferring of drainage is an unacceptable assumption, and greatly raises the risk of ruining productive soils. The Bureau has had adequate experience with drainage problems in their projects of the Upper Missouri River Region to know that to reclaim soils once damaged by water-logging and salination is expensive and sometimes impossible.

By deferring drainage the Bureau included only $38/acre for annual drainage costs in their b/c analysis. However with the installation of drains on a timely basis the annual costs would be $87/acre. The Bureau's only consideration for delaying the drainage for CENDAK is to favor a more acceptable b/c ratio. (see table 2).

We appreciate the hard work of the Subcommittee in formulating the legislation to deauthorize Oahe, and thank you for this opportunity to submit a few comments.

Sincerely yours,

Tom Fischbach
Tom Fischbach
President

ENCLOSURES

Page 12 Wednesday, Dec. 9, 1981
Huron Daily Plainsman

CENDAK benefits might not offset costs, new study says

By TENA HARALDSON
Associated Press Writer

SIOUX FALLS, S.D. (AP) — Benefits to farmers from the proposed CENDAK irrigation project might not offset the estimated $1 billion cost of the water project, a new federal study says.

CENDAK supporters say they don't accept the federal figures. However, members of United Family Farmers, which opposes CENDAK, say the findings prove the project should not be built.

CENDAK is the dream of Pierre farmer Dave Hauschild and other central South Dakota landowners who want to move Missouri River water east to the James River basin, irrigating land in six counties on the way. The plan would use parts of the defunct Oahe Irrigation Project. The idea meets with stiff opposition from the UFF, the group that led anti-Oahe protests several years ago.

CENDAK backers think the project will cost about $455 million, or $210 an acre to return $267 in benefits.

But after the Bureau of Reclamation reviewed CENDAK's proposal at the request of Gov. Bill Janklow, it estimated the cost at about $1 billion. The bureau said the project would cost at least $232 per acre and return only $230 in benefits.

"It's the same old story. Anything the federal government does is a mouse built to elephant specifications," said Jim Lewis, CENDAK executive director.

Janklow supports the CENDAK concept. Monday, the state Water and Natural Resources Board voted to include the project in the state water plan, which means it will get further evaluation.

"When you consider the current economic situation, particularly in the rural areas, I don't think it is wise for the federal government or the state to proceed with the development of CENDAK," said UFF President Tom Fischbach.

Lewis admitted the $1 billion estimate from the federal government could hurt CENDAK's image.

"I'm sure that it isn't going to do it any good," he said. "We were very unhappy at the bureau's report too. But we've always maintained we want this done privately — not by the federal government.

"The story we always get is that CENDAK is being pushed down the people's throats by a bunch of bureaucrats," Lewis said. "This is a farmer's project. If they think the cost is too high, nothing is going to be done."

Hauschild said he wasn't surprised by the outcome of the study because the bureau relied on out-dated irrigation data.

"They're still basing their drainage costs on their old studies that were done 50 years ago, and done for flood irrigation not using sprinklers," Hauschild said.

In flood irrigation, water is allowed to trickle down furrows in the field. Modern irrigation often uses a long sprinkler arm which pivots in a circle, spraying water over the crops.

"They used to say with flood irrigation you'd have to put on two foot of water a year when with sprinklers we'd probably only use eight to 10 inches a year," Hauschild said. "No wonder they needed so much drainage."

"Even throwing in their drainage costs and mitigation and everything, the thing still came out to almost a one-to-one benefit-cost ratio, which is impossible for most projects to hit," he said.

Hauschild said the federal government has spent $200 million since 1976 in agriculture loans, disaster aid and crop insurance payments in the six counties where CENDAK is planned.

"If they had invested that $200 million into a water project like CENDAK we wouldn't be on the federal payroll like we are today," he said.

United States Department of the Interior
BUREAU OF RECLAMATION
Upper Missouri Region
P.O. Box 2553
Billings, Montana 59103

IN REPLY
REFER TO: UM-750
563.

DEC 4 1981

Mr. Steve Kinsella, Executive Director
United Family Farmers, Inc.
Box 523
Aberdeen, SD 57401

Dear Mr. Kinsella:

This is in response to your letter of December 3, 1981, regarding the Bureau's review of the CH2M Hill Report on the CENDAK Irrigation Project.

We want to emphasize our intentions of working with the appropriate State and local entities whenever our professional services are desired. CENDAK is not a Bureau proposal. The Bureau reviewed the CH2M Hill Report on CENDAK at the request of Governor Janklow. Our response of November 27, 1981 (copy enclosed) was made to the State of South Dakota - the appropriate focal point for the CENDAK project. Our analysis of the CH2M Hill Report is subject to review by our Commissioner's Office and the Department of the Interior and thus may or may not reflect the ultimate Administration view of the project.

In our letter we suggested that you secure a copy of our review from the State of South Dakota. It seems appropriate that the Governor of your State is entitled to the courtesy of determining when and if our review comments are to be released for distribution. And it is that sense of discretion which leads us to focus our responses to the Governor. We intend to continue that policy.

Upon receiving your letter of November 30, we learned that copies of our report had not yet reached the Department of Water and Natural Resources in Pierre, South Dakota. By telephone conversation with representatives of the State we decided to release the comments to you and others. Enclosed is a copy of our comments. By copy of this letter we are forwarding a copy to George Piper and the Oahe Conservancy Sub-District. Again, we urge you to work with your State officials in deciding the fate of specific water project proposals. Our involvement is that of providing professional services.

Sincerely yours,

Joseph B. Marcotte, Jr.

ACTING Joseph B. Marcotte, Jr.
Regional Director

Enclosures

REVIEW AND ANALYSIS OF
CENDAK IRRIGATION PROJECT
MASTER PLAN

INTRODUCTION

The CENDAK Irrigation Project Master Plan by CH2M Hill was submitted to the Bureau of Reclamation for review. The intent of this review was to determine if the appraisal study completed by the consultants was adequate to justify a feasibility-level study under Federal standards. During the review it became evident that a few changes and additions were needed in the report to meet Federal standards.

In addition, the State of South Dakota asked the Bureau to analvze the CENDAK Plan as a potential project for inclusion in the State Water Plan as a P.L. 84-130 project. (See attached letter.) As a P.L. 84-130 project, the project would be authorized for construction under Federal Reclamation laws with the main project delivery system features constructed by the Bureau, but the rest of the project features constructed by private development with a loan received under the Distribution Systems Loan Act (P.L. 84-130). The plan, as formulated as a P.L. 84-130 project, is presented in this report.

Bureau of Reclamation
Upper Missouri Regional Office
Billings, Montana

November 1981

REVIEW OF CENDAK REPORT

Cost Estimate

For the cost estimate to be complete under Federal standards, costs should be included for a drainage system and fish and wildlife mitigation. Some adjustments in the delivery and distribution system costs and OM&R estimate are also necessary. These additional costs and adjustments are discussed in this section.

Delivery and Distribution System

Several significant cost differences were identified involving the estimates for Oahe Pumping Plant, Pierre Canal, and Blunt Reservoir. In our analysis the Oahe Pumping Plant and Pierre Canal construction costs were increased from $25.7 million to $56 million and from $34.9 million to $70 million, respectively. The construction cost estimate for Blunt Dam and Reservoir was reduced from $68.6 million to $38.5 million. The remainder of the main delivery system costs appear comparable for this level of estimate.

A distribution system for the entire project was not presented in the report. The layout for the "typical" open ditch lateral system presented in the report would probably represent a minimal system. The report estimated that the field cost for this system would be $240 per acre. Taking into consideration the scattered lands to receive water service, we feel that $500 per acre would be a more reasonable estimate for an open ditch lateral system. This includes an allowance for contingency and indirect costs.

Drainage Costs

As stated in the CENDAK Report, "One of the most important factors in a successful long-term irrigation project is adequate drainage . . . . Most of the arable land within the study area is adequately drained under existing dryland farming practices. Under irrigation, however, many of these soils could be susceptible to drainage problems because of the basin relief, restrictive soil horizons, and the limited permeability of underlying glacial till deposits." An estimate of drainage costs should be included in the cost estimate. Based on projects on similar lands, an estimate of $1,140 per acre for drainage costs is reasonable for Category I lands. This includes an allowance for contingencies and indirect costs.

Fish and Wildlife Mitigation Costs

The report recognizes that certain sloughs and potholes which provide important wildlife habitats will be destroyed by canal and reservoir construction, even though every effort will be made to design around such areas. Other wildlife habitats will be affected through removal of grasslands and tree plantings. As noted in the CENDAK report, efforts will have to be made to mitigate these losses by enhancing the canal rights-of-way and Blunt Reservoir, replacing the areas, or other measures deemed necessary. An estimate of these costs should be included in the cost estimate. A reasonable estimate for all costs associated with mitigation and enhancement of fish and wildlife resources is $100 per acre.

Operation, Maintenance, and Replacement (OM&R) Costs

The estimate in the CENDAK REPORT for annual operation and maintenance costs for the main delivery system is $2.8 million per year or $8.36 per acre for a 335,000-acre project. OM&R costs should also include the replacement and pumping costs. Based on the Bureau of Reclamation's estimate for the Oahe Project, we would expect annual O&M costs of about $10.00 per acre with an additional $2.00 per acre for replacement costs. It was stated in the CENDAK Report that pumping costs would depend upon the electrical rates used. The rates used ranged from $1.01 per acre (for land using Pick-Sloan Missouri Basin Program power at 2.5 mills per kilowatt-hour) to $15.55 for areas requiring wheeling charges. The 2.5 mills per kWh rate only applies to project pumping. Additional assigned costs for storage charges would also have to be considered in a financial analysis. For planning purposes, the market value for power should be used. The market value is presently 30 mills per kilowatt-hour which is equivalent to $15.86 per acre.

Revised Cost Estimate

The changes discussed above are presented as the Modified CENDAK Plan in the following tabulation. The total construction cost for the Modified CENDAK Plan would be $992,700,000 or $2,960 per acre.

Cost Summary
(January 1981)

	CENDAK Plan	Modified CENDAK Plan 1/
Main Delivery System	$374,500,000	$409,800,000 2/
Laterals	80,400,000	167,500,000
Drains	--	381,900,000
F&WL Mitigation	--	33,500,000
Total		
Total Construction Cost	$454,900,000	$992,700,000
Cost per acre	$1,360	$2,960
Annual OM&R per acre	$11.00	$28.00
O&M (Less Pumping)	(8.36)	(10.00)
Project Pumping	(2.85) 3/	(15.86) 4/
Replacement	(0)	(2.00)

1/ Allowances for contingencies and other costs were estimated at the same rate as in CENDAK REPORT: i.e., contingencies at 20 percent, other costs at 15 percent.

2/ Includes $36,600,000 for costs already expended for Oahe Pumping Plant, Pierre Canal, and Blunt Reservoir.

3/ Based on 2.5 mills for cost of energy plus wheeling cost of 12.5 mills.

4/ Based on 30 mills.

Analysis of Reduction in Project Acreage

The CENDAK Report is based on a project area of 396,400 acres, with 335,000 acres proposed for water service. This number was derived from a list of landowners that indicated an interest in irrigation and contributed toward the investigation. The report states that only limited information is available concerning the suitability of the project lands for irrigation. If more detailed land classification surveys reveal that there are less irrigable acres, what would be the impact on the project? In an attempt to answer this question, we completed an analysis of a project having reduced acreage.

An appraisal land inventory was completed for the Bureau's Eastern South Dakota Basins Report, 1973. In this report, lands are inventoried as Category I, II, III, and IV, which indicates the degree of suitability for irrigation. The lands in Category I are best suited for irrigation and could be provided subsurface drainage at the lowest cost.

There are 262,800 Category I acres in the counties included in the CENDAK Project area. For the purpose of this sensitivity analysis, it was assumed that the project could only support irrigation development of Category I land, or the 262,800 acres. As stated in the CENDAK Report, land classification would be required prior to any firm prediction of suitability for irrigation.

A reduction in acreage would require reducing the capacity of the main delivery system. The Oahe Pumping Plant and Pierre Canal required capacity would be reduced from 3,200 ft^3/s to 1,700 ft^3/s. The active storage capacity of Blunt Reservoir would remain at 381,000 acre-feet. The capacity of the remainder of the main delivery system was reduced in direct proportion to the reduction in acreage. It was assumed that the layout for the reduced acreage would look the same as the 335,000-acre plan presented in CENDAK Report.

The total cost for the project would be $781,900,000 and the total cost per acre would be $2,980 as shown in the following tabulation:

Cost Summary - 262,800-acre Project
(January 1981)

	Costs 1/
Main Delivery System	$324,600,000 2/
Laterals	131,400,000
Drains	299,600,000
F&WL Mitigation	26,300,000
Total Construction Cost	$781,900,000
Cost per acre	$ 2,980

1/ Allowances for contingencies and other costs were estimated at the same rate as in the CENDAK Report: i.e., contingencies at 20 percent, other costs at 15 percent.

2/ Includes $36,600,000 for costs already expended for Oahe Pumping Plant, Pierre Canal, and Blunt Reservoir.

This analysis concludes that if the irrigable acreage was reduced from 335,000 to 262,800 irrigable acres, no major changes would occur in the cost per acre.

P.L. 84-130 Plan

The State of South Dakota requested the Bureau to evaluate the CENDAK Plan, assuming the project would be partially constructed under the Distribution System Loan Act (P.L. 84-130). This Act established a program under which irrigation districts and other public agencies can obtain loans to construct their own distribution systems on projects authorized for construction under the Federal Reclamation Laws in lieu of having the distribution systems constructed by the Federal government.

The organization applying for the loan is responsible for the planning, construction, and operation and maintenance of the project facilities constructed under the loan program. The repayment provisions are the same as for a conventional reclamation project except power subsidies are not available to assist in repayment of irrigation costs.

Under the P.L. 84-130, it was assumed that the CENDAK Project layout, capacities, and acreages would remain the same as presented in the CENDAK report. The only change would be that the Federal government through the Bureau of Reclamation would construct Oahe Pumping Plant and the discharge pipeline. The remainder of the delivery system, distribution system, drains, ard fish and wildlife mitigation measures would be constructed under the P.L. 84-130 loan program. The Modified CENDAK Plan cost estimate was adjusted slightly upward to reflect the additional Bureau overhead costs for construction of Oahe Pumping Plant and the discharge pipe.

Cost Summary - P.L. 84-130 Plan
(January 1981)

	Costs 1/
Main Delivery System	$417,300,000 2/
Laterals	167,500,000
Drains	381,900,000
F&WL Mitigation	33,500,000
Total Construction Cost	$1,000,200,000
Cost per acre	$ 2,990

1/ Allowances for contingencies were estimated at 20 percent, and other costs were estimated at 15 percent for all items except Oahe Pumping Plant which were 40 percent for Federal overhead.

2/ Includes $36,600,000 for costs already expended for Oahe Pumping Plant, Pierre Canal, and Blunt Reservoir.

COMPARISON OF PLANS

An economic analysis was made of the Modified CENDAK and P.L. 84-130 Plans, comparing total project cost and total benefits. (See Tables 1 and 2.) The total project costs for the two plans have been previously presented. CH2M Hill estimated the benefits for the CENDAK Plan as $267 per acre. This benefit value was based on the Grass Rope Unit farm budget except the farm expenses did not include sprinkler irrigation units. Under present Federal criteria, the sprinkler systems must be included as a farm expense. This reduces the benefit to $230 per acre. 1/ This benefit value was used in the economic analysis of the Modified CENDAK and P.L. 84-130 Plans.

For this analysis, it was assumed that installation of the drains would be deferred for at least 8 years and would then be installed over an 8-year period. Based on this assumption, the $381,900,000 drainage cost would amount to an annual equivalent of $38 per acre (100 years at 7 5/8 percent). (See Table 2.)

The benefits slightly exceed the costs for the Modified CENDAK and P.L. 84-130 Plans.

1/ The $37 decrease in annual benefits does not equal the $96 annual decrease in cost per acre primarily because the two values are based on different costs per acre. The CENDAK Report used $560 per acre for sprinkler costs (January 1981). In the Grass Rope Unit farm budgets, the 1976 normalized costs were $272 per acre for sprinklers. This $272 per acre figure is also based on about 30 percent side-roll systems rather than 100 percent center-pivot systems proposed in the CENDAK Report. The Bureau did not update the 1976 farm budgets for this economic analysis because recent updates of similar budgets show that the net benefits would remain about the same at current price levels due to corresponding increases in prices received for items produced. Our current estimate of cost of a center-pivot system for 135 acres would be about $500 per acre installed, which amounts to an annual cost of $70 in the benefit analysis.

Table 1

Economic Analysis

	CENDAK Plan	Modified CENDAK	P.L. 84-130 Plan
Construction cost	$454,900,000	$992,700,000	$1,000,200,000
Less Present Worth of Deferred Drains 1/	0	-215,800,000	-215,800,000
Economic Construction Cost	$454,900,000	$776,900,000	$ 784,400,000
Interest During Construction	-	118,480,000	119,620,000
Total Investment	$454,900,000	$895,380,000	$ 904,020,000
Annual Equivalent Cost (7-5/8%, 100 years)			
Investment	$ 34,708,000	$ 68,317,000	$ 68,976,000
OM&R	3,685,000	9,380,000	9,380,000
Total Annual Cost	$ 38,393,000	$ 77,697,000	$ 78,356,000
Annual Sprinkler Cost	32,160,000 2/	3/	3/
Annual Direct Irrigation Benefits	$ 89,445,000 $	$ 77,050,000	$ 77,050,000
Net Benefits	N/A	$ -647,000	$ -1,306,000
B/C Ratio	N/A	.99	.98

1/ Drains are deferred for 8 years and built over an 8-year period.
2/ This is based on $560 per acre with 15 percent financing over 15 years.
3/ Cost of onfarm sprinkler were included in benefit estimate.

SUMMARY AND CONCLUSIONS

We evaluated the plan presented by CH2M Hill as the CENDAK Project Master Plan. Adjustments and additional costs were added to the CENDAK Plan cost estimate to meet Federal standards. These changes in the cost estimate were presented as the Modified CENDAK Plan. At the request of the State of South Dakota, we analyzed the Modified CENDAK Plan, assuming that part of the project would be funded by a P.L. 84-130 loan. Although the economic analysis shows the project benefits are slightly below unity, Federal feasibility investigations are warranted for the CENDAK Project in view of the level of study and the fact that $36,600,000 of the project cost have already been expended as part of the Oahe Project.

PHONE (605)853-2705

CENDAK

P.O. BOX 69
MILLER, SOUTH DAKOTA 57362

February 11, 1982

Senator Frank Murkowski, Chairman
Water and Power Sub-Committee
Senate Committee on Energy and
Natural Resources
3104 Dirksen Building
Washington, DC 20510

Dear Chairman Murkowski:

Important water legislation before the South Dakota Legislature prevents CENDAK'S attendance and participation in Committee Hearing on S 1553 to be held on February 12, 1982.

CENDAK supports S 1553 and revisions as proposed by the administration. Refer to testimony presented at field hearing held in Pierre, August 1981.

Passage of the bill is vital to CENDAK and the people of South Dakota.

Sincerely,

Don Faulstich by jm

Don Faulstich
Vice Chairman
CENDAK
Rt. 1, Box 39
Highmore, South Dakota 57345

DF:jm

Table 2

Annual Costs and Benefits Per Acre

Annual Cost/Acre	CENDAK Plan	Modified CENDAK	P.L. 84-130 Plan
Main Delivery System	$85	$93	$95
Laterals System	18	38	38
Deferred Drains 1/	-	38 1/	38 1/
Mitigation	-	8	8
Onfarm Sprinklers	96 2/	3/	3/
Subtotal	$199	$177	$179
Interest During Construction	-	27	27
OM&R	11	28	28
TOTAL ANNUAL COST/ACRE	$210	$232	$234
Annual Benefits Per Acre	$267	$230	$230

1/ Drain installation is deferred 8 years and built over 8 year construction period (no deferral would be $87).

2/ Based on $560 per acre with 15 percent financing over 15 years.

3/ Sprinkler costs were included in farm budgets for benefit analysis.

THE STATE OF WYOMING

ED HERSCHLER
GOVERNOR

Water Development Commission

BARRETT BUILDING TELEPHONE: 307-777-7626 CHEYENNE, WYOMING 82002

Michael H. Reese
Administrator

Nelson E. Wren, Jr.
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Kenneth Kennedy
William J. Kirven, Jr.
J.W. Wes Myers
James Noble
Willard C. Rhoads

1982 FEB -9 AM 10:58

The Hon. Malcolm Wallop
United States Senate
Washington, D.C. 20510.

Nov. 4, 1982

Dear Malcolm,

You were quoted in the Billings Gazette on Jan.28th as saying that a bill to increase the size of Buffalo Bill will go to hearing before a Senate sub-committee in Wash.D.C. on Feb. 12th.

If the bill that goes to hearing is S.1409(97th. Cong.1st Sess) I would suggest it wise to scratch Section 7.

If Sec. 7 remains, I would like the opportunity to submit written objections to the Section.

The task force of the Cody, Powell, and Lovell Chambers have done a yeoman job of getting support for "raising Buffalo Bill Dam" but they have done so by ommitting all mention of "Polecat bench", which is extremely controversial on the river. There has been no mention of it in the press or at the Powell water seminar in Powell as a part of raising "Buffalo Bill dam"

I have entered (1-8-1982) into the minutes of WWDC a statement of support for the Governor's Bill for cost sharing Buffalo Bill together with a recommendation for Commission policy on trans-basin diversions which he had previously requested. (After listening to the Presidents message to Congress, I will recomend ~~x~~ reversing 3 & 4) Quote:
IF AND WHEN FINAL ALLOCATION AND DISPOSAL IS MADE OF SURPLUS STORAGE WATER, WHICH HAS BEEN ACQUIRED BY VIRTUE OF STATE FUNDING AND INITIATIVE, I BELIEVE THAT IT SHOULD BE ALLOCATED UNDER THE FOLLOWING GENERAL GUIDELINES:
FIRST TO THE DRAINAGE OF ORIGIN LANDS AND USES WHICH HAVE BEEN DEVELOPED BY PRIVATE INITIATIVE AND INVESTMENT AND ARE PRESENTLY IN NEED OF SUPPLY FOR THEIR MINIMUM NEEDS.
SECOND TO THE DRAINAGE OF ORIGIN LANDS AND USES WHICH MAY BE DEVELOPED BY PRIVATE INITIATIVE AND INVESTMENT WITHOUT STATE INVESTMENT.
THIRD TO THE DRAINAGE OF ORIGIN LANDS AND USES REQUIRING PUBLIC SUBSIDY.
FOURTH TO TRANS BASIN DIVERSIONS WHICH DO NOT REQUIRE SUBSIDY.
FIFTH TO TRANS BASIN DIVERSIONS WHICH REQUIRE SUBSIDY.

In my opinion "Polecat Bench" should be in category 5 and the water should logically come from the Clarks Fork river, with any surplus from the Shoshone going south.

Very truly yours,

Willard C. Rhoads

Willard C. Rhoads, Box 57, Cody 82414

Feb. 5, 1982

1982 FEB -9 AM 11: 04

Subcommittee on Water and Power
Energy and Natural Resources Committee
Room 3104
Dirksen Senate Bldg.
Washington, D.C. 20510

Dear Senators:

Upon receipt of Senate Bill 1409, we the major water users on the lower end of the Shoshone River, read the bill and adamantly oppose any such legislation as long as it includes any mention of, or funding for, the Polecat Bench Irrigation Project.

It is unclear why those drafting the bill would omit any mention of Polecat Bench in the opening six sections of the bill, then apparently attempt to sneak the project through in sections 7 and 8.

Polecat Bench has been discussed for the better part of a century. Many questions and concerns have been raised about the project. We believe the magnitude of the Polecat Bench irrigation project and the many questions it raises deserve a separate piece of legislation for any type of funding. The project should be required to stand on its own merit and not be allowed to piggyback on a justified project such as raising the Buffalo Bill Dam.

The legislation further states preference will be given to Shoshone Project landowners in distributing lands in Polecat Bench. No such preference should be given to any project which might very well be partially funded with dollars from the State of Wyoming.

We support the attached resolution approved in 1980 by lower Shoshone River water users.

Approved by:

Mayor Herman Fink, Lovell
Town Councilmen John Nickle, Gerald Brinkerhoff,
Douglas Savage, Bob Rasmussen

Lovell Town Manager and North Big Horn-Lovell
Chamber of Commerce President Bob Brandt

Hunt Canal Co. directors Hack Jolley, Hap Jolley,
Buff Tippetts, Joe Bassett

Sidon Canal director Rodney W. Crosby

Globe Canal President George Wambeke

Lovell Canal director Brownie J. Brown

Doyle Moncur, former president, Shoshone River
Water Users Assn; member, Buffalo Bill Dam
Task Force; Lovell Canal irrigator

NORTH BIG HORN
LOVELL CHAMBER OF COMMERCE
336 Nevada Ave. Lovell, Wyo. 82431 307-548-7552

The following resolution was adopted by unanimous vote by the general membership of the North Big Horn-Lovell Chamber of Commerce at the regular general membership meeting on Monday, November 26, 1979.

WHEREAS current agricultural and municipal water rights are jeopardized by the Polecat Bench Irrigation Project;

WHEREAS the Shoshone River has run dry in recent years; then

RESOLVED: The North Big Horn-Lovell Chamber of Commerce is opposed to the Polecat Bench Irrigation Project north of Powell until certain conditions are met which guarantee the safety and future of current water users, both agricultural and municipal. These include the granting of preferential water rights, whether direct flow or storage, to all current users.

While we recognize the benefits of additional farmland in the Big Horn Basin, we cannot justify placing more load on our available water. Not only is this unfair to current users, it is unfair to those who would buy farmland on Polecat Bench expecting plenty of water.

We, therefore, ask that a complete study of the Shoshone River water supply be made by an independent state committee or agency, in no way connected with the Water and Power Resources Service (Formerly the Bureau of Reclamation) or any Big Horn Basin community.

RESOLVED, however, the North Big Horn-Lovell Chamber of Commerce wholeheartedly endorses the concept of raising the level of Buffalo Bill Dam and updating the power plant therein to meet the current demands for more energy and insure the Shoshone River no longer goes dry.

North Big Horn-Lovell
Chamber of Commerce

WYOMING MUNICIPAL POWER AGENCY (307) 334-2170
WMPA
P.O. BOX 1075
LUSK, WYOMING 82225

1982 FEB -5 PM 4:25

January 28, 1982

Honorable Malcolm Wallop
United States Senate
6327 Dirksen
Senate Office Building
Washington, D.C. 20510

Dear Senator Wallop:

As Chairman of the Board of the Wyoming Municipal Power Agency, which serves some 20,000 people in seven Wyoming cities and towns, I write to update you on the actions of the Agency relative to Buffalo Bill Dam and to advise you of draft legislation on the state level which we believe would be detrimental to the Agency and its customers.

On May 24, 1980 the Executive Director of this Agency appeared before the Subcommittee on Energy Research and Development of the Committee on Energy and Natural Resources of the Senate to outline the Agency's position on S.821 which was a bill to raise the Buffalo Bill Dam and refurbish the powerplant. A copy of his testimony is attached for your reference. The essence of the statement was that the Agency supported legislation to rebuild the generating plant at Buffalo Bill whether the dam was raised or not. Unfortunately, S.821 was not to become law.

In 1980, the Bureau of Reclamtion closed the generating plant because of age and safety. This action led to a condition where the City of Gillette believed it could obtain a Preliminary Permit from the Federal Energy Regulatory Commission which would grant exclusive right to study the site for its hydroelectric potential. This could lead to an application for a license for this site, from the same body, which would effectively remove this resource from the Western Division of the Pick Sloan Missouri Basin program for the next 50 years. If the Bureau of Reclamation were to lose this resource, it would be forced to reduce its allocated amounts when new contracts are issued to its customers in 1989 and thereafter. The net effect is to remove a source of generation that many Wyoming cities, towns and rural electrics had depended upon for years and dedicate it solely to a third party. Since the members of the Agency were charter members of the Pick-Sloan system, the Board of Directors was compelled to act to protect their historical interest in this facility.

The Agency has therefore filed a Notice of Intent to File a License Application for Buffalo Bill with the FERC within the time frame alloted by the filing for preliminary permit by Gillette. This may seem somewhat contradictory on first examination, but is perfectly consistent when viewed in light of the above discussion. Further, the Agency was created expressly for the purpose of construction generating facilities for its member municipalities; the very same entities which were receiving allocations of Buffalo Bill. Only the Agency, of all preference customers in Wyoming, has a proven track record of developing generation for its members. This combination of history and capabilities makes the Agency by far the most viable entity to construct and operate Buffalo Bill; with the exception of the USBR.

With the above discussion in mind, I wish to bring to your attention the matter of some draft legislation for the 1982 Budget Session of the Wyoming State Legislature which relates to state financing of improvements to Buffalo Bill Dam. It is my understanding that this draft legislation would provide for raising of the dam and refurbishing the powerplant. Further, this draft would subsidize the State of Wyoming's involvement by having the State sell the output of the powerplant to the highest bidder.

From the Agency's perspective this draft legislation is very reminiscent of similar legislation, on a federal level, which was proposed for the Palisades Dam in Idaho; which subsequently failed to pass as preference customers nationwide displayed their concern over such a circumvention of preference in the marketing of hydroelectric power from federal facilities. Because the draft legislation currently under consideration at the state level bears such a strong resemblance to the Palisades Dam issue in that respect, we must voice our opposition to any attempt at the federal level to legitimize a circumvention of preference. It is not our intention however, to discourage the state from financial participation in the development of Wyoming water resources. Rather, we believe these are two separate issues, each of which must be treated independently.

It is my hope that this letter has clarified the Agency's position with respect to Buffalo Bill Dam and its pending Application for License. Further, I urge you to resist any attempt at altering the long established principle of preference in marketing of hydropower from the federal facilities.

Should you have any questions, please do not hesitate to contact me. Your attention to this matter is greatly appreciated.

Sincerely,

John C. Harrison
Chairman of the Board of Directors

JCH:kt

Enclosure (1)

COMMENTS ON SENATE BILL 698:
RELOCATION OF THE YUMA COUNTY WATER USERS ASSOCIATION

12 FEBRUARY 1982

ANN A. PRITZLAFF

STATE HISTORIC PRESERVATION OFFICER

The Yuma County Water Users Association is currently occupying significant sites within a National Historic Landmark. Located on the Arizona and California shores of the Colorado River at Yuma, Arizona, the Yuma Crossing and Associated Sites received National Historic Landmark status in 1966. Designation as National Historic Landmark provides the greatest means of recognition of historic properties in the United States and is limited to sites of extreme national significance.

The Yuma Crossing and Associated Sites received national recognition for its significance as a transportation and communications link between New Spain and Alta California during the Spanish Colonial Period, and between the American Southwest and California during the westward expansion movement.

In addition to the site of the crossing itself, there are three groups of historic structures and several associated sites of engineering significance included within the Landmark boundaries. On the California shore stand the surviving buildings of Fort Yuma, a former U.S. Army post that guarded the Crossing from 1850 to 1885, which are presently owned and utilized by the Quechan Indian Reservation. Across the river on the Arizona side are the structures remaining of the Yuma Quartermaster Depot, which supplied regional frontier forts from 1864 through the 1880's. The Depot consisted of numerous related adobe and stone structures, several of which are in public ownership and slated for public use (Office of the Depot Quartermaster and Depot Water Reservcir -- Arizona State Parks Board, Officers' Quarters and Kitchen -- City of Yuma). The remainder of the structures are administered by the Yuma County Water Users Association through their lease agreement with the Bureau of Reclamation, U.S. Department of the Interior. East of the Depot are the stone cell blocks and guard towers of the Arizona Territorial Prison. Actively operated as a prison from 1876 to 1910, the Territorial Prison is now owned and operated by the Arizona State Parks Board and attracts over 150,000 visitors annually.

The historic significance of the Yuma Crossing and Associated Sites transcends six centuries and represents the multi-cultural development of the Southwest. The first known use of the crossing site below the junction of the Colorado and Gila Rivers was by local Indians taking advantage of a natural crossing. Recorded history begins in 1540 with the arrival of Spanish explorers, Hernando de Alarcon and Melchar Diaz, -- 67 years before the English settlement in Jamestown, Virginia. Later, missionary Father Eusebio Francisco Kino explored and documented the area from the late 1680's to 1704. In the 1770's and 1780's Fray Francisco Garcia and Captain Juan Bautista de Anzo visited the crossing and established a mission, presidio and colony which were subsequently destroyed by Yuma Indians in 1781.

Anglo trappers and explorers began utilizing the crossing as early as 1827. By 1846 the crossing was an integral part of the Gila Trail, and during the Mexican War (1846-1848) guides Kit Carson and Antoine Leroux led the U.S. Army across the Colorado River at the Yuma Crossing.

The discovery of gold in California dramatically increased westward travel, and several overland routes converged at Yuma Crossing. To accommodate the many travelers, a crude ferry operation was managed by the Yuma Indians. The Indians operated the ferry until 1850 when Louis J. F. Jaeger established a sophisticated system at what was subsequently called "Jaeger's Landing".

Recognizing the strategic importance of the Crossing, the U.S. Army established a post above Jaeger's Landing in 1850. Despite frequent Indian attacks, the Fort and the ferry crossing developed and prospered. Most major southern transcontinental stage lines directed traffic to the Yuma Crossing and, concurrently, river traffic increased. River traffic was a preferable alternative to the long desert overland routes, and in the late 1850's the War Department began delivering supplies to the Fort by the river route. Ships would arrive at the mouth of the Colorado River in the Bay of Lower California and transfer cargo onto steamboats for shipment upriver to Yuma and beyond.

In 1864 the Army built a large Quartermaster Depot at Jaeger's Landing. The depot location was ideal at the apex of several overland routes, the junction of two major river routes, and with the protection of the nearby Fort. The Depot served the southwest through the 1880's when the railroad installation offered new routes and efficient means of transfer, thus prompting construction of satelite depots throughout the region. The activities at the Fort also diminished in the 1880's with the decline in trade at the Depot and reduction of Indian troubles in the more densely settled region.

During the Depot's height of activity from 1850-1885, Colorado City, later Arizona City and still later Yuma, grew up on the Arizona shore. The raucous town served as a waystation on the overland trails and the terminal point for the busy steamboat traffic. Contributing to the growth of the community was the 1876 installation of the large Territorial Prison east of the Depot. The Prison was sited in Yuma because of the strategic location and the protection from Indians offered by the nearby fort. The large fort consisted of two-story stone cell blocks, guard towers, and banked exercise areas and served the entire Arizona Territory until 1909.

From the late 1880's into the twentieth century, the Depot and Fort served other public uses. The City of Yuma was developing as a regional service center for the surrounding agricultural area, and although the crossing was not the focus of transcontinental travel as it was in the previous years, the crossing remained in use. The several Depot buildings were used as a weather station, telgraph station, customs house and immigration station. The Fort was used for the Quechan Indians, curiously demonstrating the end of the Indian insurrections in southwestern Arizona.

The rich, colorful history of the Yuma Crossing is well exemplified through the remaining historic structures. The Fort and Prison have been preserved to provide a testimony of their former use. Preservation of the Depot, however, remains fragmented. Probably the most significant key to the four hundred years of history at the crossing, the Depot site provides information on prehistory, Spanish and Anglo exploration, westward expansio military settlement, boundary enforcement, overland and river travel, unique river engineering methods, and nineteenth century vernacular Southwestern architecture. Presently, two of the significant buildings are preserved in public use, but their interpretation is hampered by their disassociation from the adjacent buildings occupied by the Water Users.

The Arizona State Historic Preservation Office has been actively involved in pursuing the recognition and preservation of all components of this nationally significant site. The federal government has stated its committment to the stewardship of its historic properties through the Historic Sites Act of 1935, the National Historic Preservation Act of 1966, and the Archaeological and Historic Preservation Act of 1974. Further, directives outlining federal agencies' responsibilities were mandated through Executive Order 11593 (5-13-1971) and the Amendments Act of 1981 to the National Historic Preservation Act. Our office has consulted with the Bureau of Reclamation in regard to treatment of the historic buildings as required in Section 106 of the National Historic Preservation Act, as amended. At that time site inspections were completed which revealed that the historic buildings were deteriorating under occupancy by the Water Users Association. It is my hope these important unreplaceable components of our heritage will receive proper treatment to arrest deterioration and, further, allow them to provide focus for the interpretation of the Historic Yuma Crossing and complement the adjunct development of the City of Yuma.

UNITED FAMILY FARMERS ATTN TOM F
BOX 523
ABERDEEN SD 57401

western union Mailgram

4-0226158042 02/11/82 ICS IPMBNGZ CSP WSHB
6052945311 MGM TDBN CLAREMONT SD 188 02-11 1258P EST

Russ

SENATOR FRANK MURKOWSKI
INTERIOR SUB COMMITTEE WATER AND POWER
DIRKSEN SENATE BLDG ROOM 3106
WASHINGTON DC 20510

IN REGARDS TO SENATE BILL 1553 OUR ORGANIZATION IS OPPOSED TO FURTHER STUDY OF USE OF OAHE FACILITIES UNDER SECTION 2A1, AREA STUDIES KNOWN AS CENDAK HAVE ALREADY PROVEN TOO COSTLY, AREA HAS BEEN STUDIED MANY TIMES AND THEN FOUND UNSUITABLE FOR MAJOR DIVERSION SCHEME, SECTION 3 OF THE BILL IS INADEQUATE IN ADDRESSING OAHE DEAUTHORIZATION, OUR ORGANIZATION POSITION IS COMPLETE DEAUTHORIZATION, CURRENT LANGUAGE NOW BEING INTERPRETED TO BE ONLY A MORATORIUM, SECTION 4 WE RAISE THE QUESTION OF THE FISCAL SOUNDNESS OF GRANTING LOW POWER RATES FROM AN ALREADY OVER EXTENDED PICK-SLOAN MISSOURI RIVER BASIN POWER ACCOUNT, THIS IN EFFECT COULD CREATE HIGHER ELECTRIC RATES FOR ALL CONSUMERS OF BUREAU POWER IN THE AREA AND FURTHER OVEREXTEND THE FUND, WE UNDERSTAND THE INTENT OF THIS BILL AS TOLD US BY OUR CONGRESSIONAL DELEGATION WAS TO AT LEAST DEAUTHORIZE PART OF THE OAHE FEATURES, FURTHER WRITTEN TESTIMONY WILL BE SUBMITTED FOR THE RECORDS, PLEASE INCLUDE THIS STATEMENT IN THE RECORDS,

UNITED FAMILY FARMERS, TOM FISCHBACH, PRESIDENT, BOX 523, ABERDEEN SD 57401

12:57 EST

MGMCOMP

5241 (R1/78)

TO REPLY BY MAILGRAM, SEE REVERSE SIDE FOR WESTERN UNION'S TOLL - FREE PHONE NUMBERS

D S PIPER
CARPENTER SD 57322

western union Mailgram

4-062988S041 02/10/82 ICS IPMBNGZ CSP WSHB
6053527166 MGM TDBN CARPENTER SD 91 02-10 1054P EST

SENATOR FRANK MURKOWSKI
ATTN RUSS BROWN
WATER AND POWER SUB COMMITTEE
3104 DIRKSON BLDG
WASHINGTON DC 20510

SECTION 2A1 OF S1553 INTENDS THE AUTHORIZATION OF A FEASIBILITY STUDY FOR THE CENDAK IRRIGATION PROJECT, I AM WRITING TO OPPOSE THIS ACTION, IN THEIR ECONOMIC ANALYSIS OF THE CENDAK APPRAISAL STUDY RELEASED LAST NOVEMBER, THE BUREAU OF RECLAIMATION SHOWS A DEFERRAL OF NECESSARY DRAINAGE FACILITIES IN ORDER TO FAVOR A FEASIBILE BENEFIT-COST RATIO, THE BUREAU IS BIASING THE STUDY AT A HIGH RISK OF RUINING PRODUCTIVE FARM LAND.

GEORGE PIPER CARPENTER SD 57322

22:51 EST

MGMCOMP

5241 (R1/79)

TO REPLY BY MAILGRAM, SEE REVERSE SIDE FOR WESTERN UNION'S TOLL - FREE PHONE NUMBERS

ARCHITECTURE
PLANNING
HISTORIC
PRESERVATION

GERALD A. DOYLE & ASSOCIATES

4331 NORTH
TWELFTH ST.
PHOENIX, ARIZ.
85014
(602) 264-3082

February 9, 1982

The Honorable Frank Murkowski, Chairman
Energy and Natural Resources Committee
The United States Senate
Washington, D.C.

Dear Senator Murkowski:

As the author of the attached Yuma Quartermaster Depot report and a historical architect familiar with many of our national monuments, I urge the Energy and Natural Resources Committee to give favorable consideration to Senate Bill 698. This bill permits the relocation of the Yuma Water Users' Association from the historically significant structures of the Yuma Crossing to another location.

I strongly believe that the Yuma Crossing National Historical Landmark is one of the nation's most significant historic sites, as the crossing was a major factor in Western settlement. Thus, I feel that the protection of its century-old buildings should become a national goal. To this end, the relocation of the Yuma Water User's Association is an important undertaking.

Very truly yours,

GERALD A. DOYLE & ASSOCIATES, P.C.

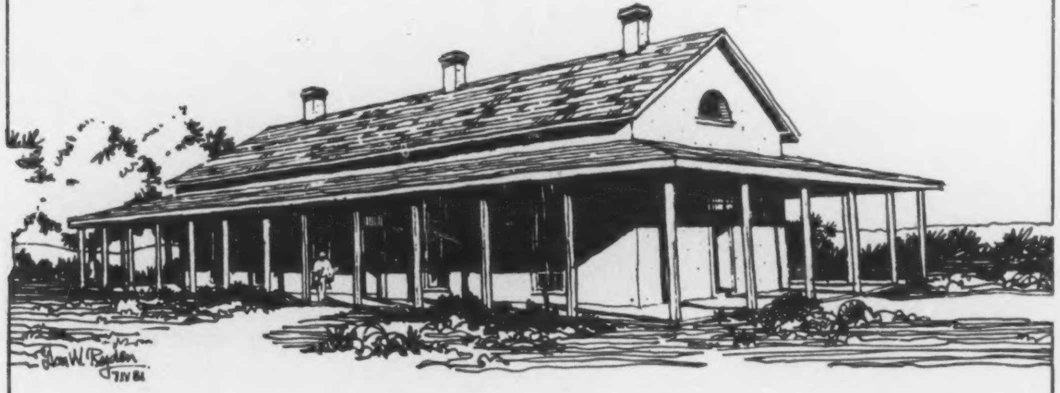
Gerald A. Doyle

Gerald A. Doyle, AIA
President

GAD/mb

OFFICE OF THE DEPOT QUARTERMASTER

at the Yuma Quartermaster Depot



An Historic Structure Report

GERALD A. DOYLE & ASSOCIATES, A.I.A. **HISTORICAL ARCHITECTS**

AN HISTORIC STRUCTURE REPORT AND PRESERVATION RECOMMENDATIONS FOR THE INTERPRETIVE DEVELOPMENT OF THE

OFFICE OF THE DEPOT QUARTERMASTER

at the Yuma Quartermaster Depot

An Administrative Unit of the Yuma Territorial Prison State Historic Park, Yuma, Arizona

Prepared by:
GERALD A. DOYLE & ASSOCIATES, AIA

Historical Architects
4331 North 12th Street
Phoenix, Arizona 85014

Don W. Ryden, AIA, project architect

For:
THE ARIZONA STATE PARKS BOARD

ARIZONA
STATE
PARKS

Governor:
Bruce Babbitt

State Parks Board:
A.C. Williams, Chairman
Duane Miller, Vice Chairman
Pricilla Robinson, Secretary
Sam Ramirez
Gwen Robinson
Cabot Sedgwick
Joe T. Fallini

State Parks Director:
Michael A. Ramnes

January 1982
GADA 8016

YUMA QUARTERMASTER DEPOT

AT THE YUMA TERRITORIAL PRISON STATE HISTORIC PARK

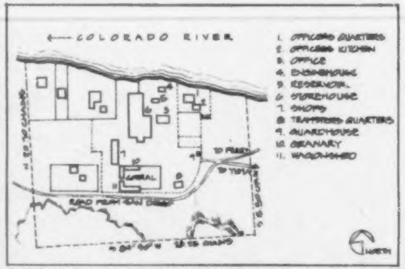
THE YUMA QUARTERMASTER DEPOT WAS ESTABLISHED BY THE U.S. ARMY IN 1864 ON A SITE ADJACENT TO THE YUMA CROSSING FERRY LANDING ON THE ARIZONA SIDE OF THE COLORADO RIVER. THIS PLACE WAS CHOSEN FOR A SUPPLY DEPOT BECAUSE OF ITS ADVANTAGEOUS LOCATION AS A TRANSFER POINT FOR MATERIEL ARRIVING BY BOAT FOR DISTRIBUTION TO THE MILITARY POSTS OF ARIZONA, NEW MEXICO AND NEVADA. ARMY ESCORTS FROM FORT YUMA, LOCATED ACROSS THE COLORADO RIVER, ACCOMPANIED THE FREIGHT WAGON TRAINS ON SUPPLY MISSIONS TO THE OUTPOSTS AND PROTECTED THEM FROM INDIAN ATTACK.

THE ORIGINAL DEPOT BUILDINGS BURNED IN 1867 AND WERE IMMEDIATELY REBUILT. ADDITIONAL BUILDINGS WERE CONSTRUCTED DURING THE FOLLOWING YEARS. THE OFFICE OF THE DEPOT QUARTERMASTER WAS BUILT IN 1872 AND REMAINS TODAY IN A REMARKABLY GOOD STATE OF PRESERVATION. SEVERAL OTHER EARLY BUILDINGS, INCLUDING THE WAREHOUSE, OFFICERS QUARTERS (CUSTOM HOUSE) AND KITCHEN, RESERVOIR, TEAMSTERS' BARRACKS AND QUARTERS, REMAIN IN ALTERED OR DETERIORATED CONDITION.

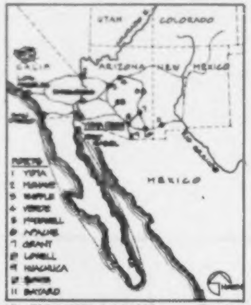
THE Q.M. SUPPLIES FROM CALIFORNIA WERE CARRIED BY SEVERAL DIFFERENT MODES OF TRANSPORTATION BEFORE ARRIVING AT THEIR FINAL DESTINATION. GOODS WERE BROUGHT TO THE MOUTH OF THE RIVER BY OCEAN-GOING SHIPS AND WERE TRANSFERRED TO SHALLOW-DRAFT RIVER STEAMERS. AT THE RIVERFRONT Q.M. WAREHOUSE THE GOODS WERE LOADED ONTO CARS THAT RAN ON A NARROW TRACK THROUGH THE BUILDING. THE GOODS WERE EITHER STORED FOR LATER DISTRIBUTION OR IMMEDIATELY LOADED ONTO 6-MULE FREIGHT WAGONS WAITING AT THE OTHER END OF THE BUILDING.

A BUILDING FOR THE OFFICE OF THE DEPOT Q.M. (FORMERLY LOCATED IN THE WAREHOUSE) WAS BUILT IN EARLY 1872. IN 1875 ONE ROOM OF THE BUILDING WAS ALSO OCCUPIED BY THE SIGNAL CORPS WHICH MAINTAINED A TELEGRAPH OFFICE AND WEATHER STATION.

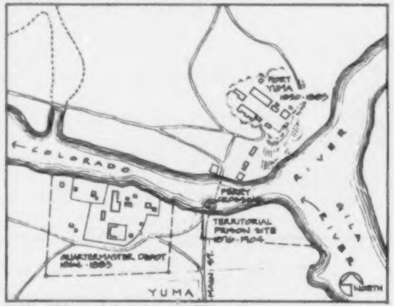
WITH THE COMING OF THE RAILROAD ACROSS THE SOUTHWEST, THE USE OF STEAMBOATS DECLINED AND THE ONCE VITAL Q.M. DEPOT WAS ABANDONED IN 1883. THE SIGNAL CORPS OFFICE DID REMAIN UNTIL 1891 WHEN THE WEATHER SERVICE WAS SEPARATED FROM THE CORPS. CIVILIAN OBSERVERS IN THE WEATHER SERVICE REMAINED UNTIL 1949. THE BUILDING WAS THEN OCCUPIED AS AN OFFICE OF THE U.S. BOUNDARY COMMISSION UNTIL 1966.


← COLORADO RIVER
1. OFFICERS QUARTERS
2. OFFICERS KITCHEN
3. OFFICE
4. ENGINEHOUSE
5. RESERVOIR
6. STOREHOUSE
7. SHOPS
8. TEAMSTERS QUARTERS
9. GUARDHOUSE
10. GRANARY
11. WAGONSHED
CORRAL
TO FERRY
TO YUMA
ROAD FROM SAN DIEGO
NORTH

PLOT PLAN OF YUMA QUARTERMASTER DEPOT · 1871


UTAH
COLORADO
CALIF.
ARIZONA
NEW MEXICO
MEXICO
FORTS
1 YUMA
2 MOHAVE
3 WHIPPLE
4 VERDE
5 McDOWELL
6 APACHE
7 GRANT
8 LOWELL
9 HUACHUCA
10 BOWIE
11 BAYARD
NORTH

MILITARY SUPPLY ROUTES 1865-1880


FORT YUMA 1850-1883
← COLORADO
RIVER
GILA RIVER
FERRY CROSSING
TERRITORIAL PRISON SITE 1876-1909
QUARTERMASTER DEPOT 1864-1883
YUMA
MAIN ST.
NORTH

YUMA CROSSING AND ASSOCIATED SITES NO SCALE

THE ARIZONA STATE PARKS BOARD ACQUIRED THE OFFICE OF THE DEPOT QUARTERMASTER IN 1974 AND THE WATER RESERVOIR IN 1981. THE BUILDINGS WERE PLACED ON THE NATIONAL REGISTER OF HISTORIC PLACES IN 1969 AND ARE NOW AN ADMINISTRATIVE UNIT OF THE YUMA TERRITORIAL STATE HISTORIC PARK.

THE HISTORIC ARCHITECTURAL RESEARCH ON THE OFFICE OF THE DEPOT QUARTERMASTER WAS DONE BY GERALD A. DOYLE & ASSOCIATES, HISTORICAL ARCHITECTS, PHOENIX, ARIZONA. RON W. RYDEN, AIA, SUPERVISED THE FIELD WORK AND PREPARED THE MEASURED DRAWINGS WITH THE ASSISTANCE OF TRICIA DOYLE.

THE PROJECT WAS FUNDED BY THE STATE OF ARIZONA, ACTING THROUGH THE STATE PARKS BOARD.

DRAWN BY: RON W. RYDEN 30 JULY 1981

GERALD A. DOYLE & ASSOCIATES Historical Architects [illegible] · PHOENIX, ARIZONA [illegible]	QUARTERMASTER DEPOT YUMA QUARTERMASTER DEPOT YUMA, ARIZONA		HISTORIC AMERICAN BUILDINGS SURVEY SHEET 1 OF 4 SHEETS	

CONTENTS

Page

5 INTRODUCTION

5 Project Background
6 Study Methodology

9 CHAPTER 1 ENVIRONMENTAL AND CULTURAL SETTING
9 Project Area Description
13 History of the Yuma Crossing
21 History of the Yuma Quartermaster Depot

29 CHAPTER 2 CONSTRUCTION HISTORY

59 CHAPTER 3 EXISTING CONDITIONS

85 CHAPTER 4 DATA INTEGRATION AND CONCLUSIONS

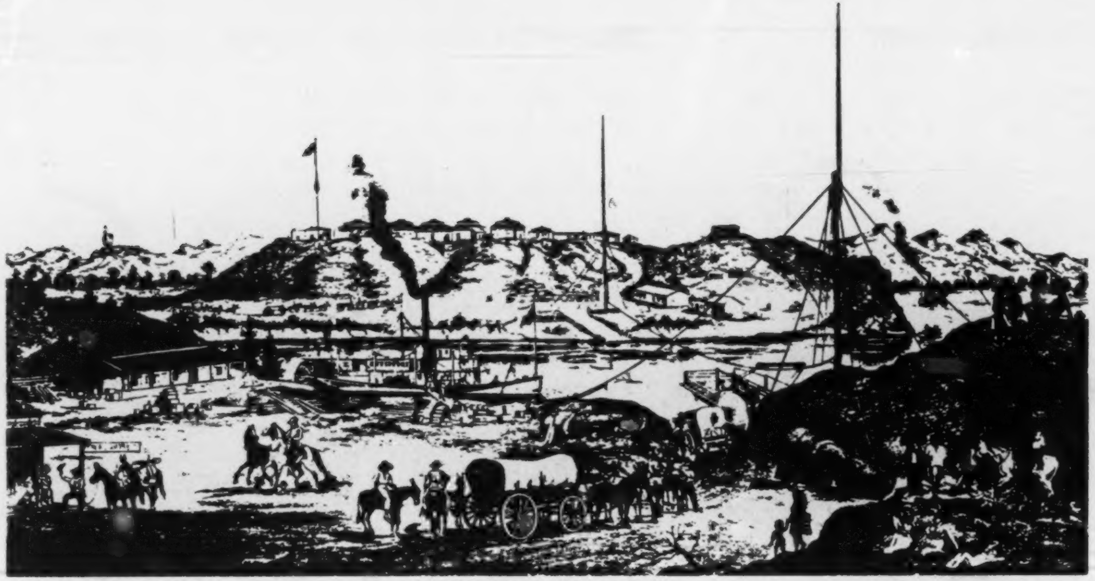
105 CHAPTER 5 DEVELOPMENT AND INTERPRETATION
105 Preservation Objectives
108 Recommended Preservation Program
116 Interpretation
122 Conclusion

125 REFERENCES CITED

130 BIBLIOGRAPHY

131 APPENDIX A HISTORIC DOCUMENTS

139 APPENDIX B ARCHAEGLOGICAL INVESTIGATIONS



Arizona Pioneer's Historical Society

4 View toward the north of the ferry landing in Arizona at Yuma Crossing. Several wagon teams are seen waiting to embark while a steamboat unloads at the store of Hooper and Hinton. Fort Yuma is seen across the river in California.

INTRODUCTION

PROJECT BACKGROUND

The Office of the Depot Quartermaster, an historic military building dating from the era of the American settlement of the Southwest, is one of several structures on the Lower Colorado River in or near Yuma, Arizona, which played a major role in the history of the Yuma Crossing, a principal locus on the southern route of migration to the West. The property is a National Historic Landmark and was placed on the National Register of Historic Places in 1966 as one of the elements included in the nomination for the "Yuma Crossing and Associated Sites."

The purpose of this historic structure report is to assimilate and summarize previously developed historic data on the Office of the Depot Quartermaster, record additional data obtained by the authors during their investigation of the property, identify actions required to assure the preservation of the building, and recommend an interpretive program for public appreciation and visitation of this important cultural resource.

286

This study is a part of the continuing research on the property undertaken by the Arizona State Parks Board since the property was acquired by the State of Arizona in 1969. In 1972 the first detailed investigation of the building was initiated and directed by Thomas J. Caperton, then manager of the Yuma Territorial Prison State Historic Park. In undertaking the current project, the authors wish to acknowledge their use of the Caperton data and the cooperation and assistance of a number of individuals.

The following persons were helpful in providing access to historical documents and other important data:

Mr. Paul Malmberg,	Arizona State Parks Area Manager
Mr. Neil Donkersley,	Park Manager, Yuma Territorial Prison State Historic Park
Ms. Diane Fadness,	Park Ranger, Yuma Territorial Prison State Historic Park
Mr. Andrew Masich,	Curator of the Century House Museum, Arizona Historical Society, Yuma

STUDY METHODOLOGY

The research project was designed primarily as an architectural study, but was supplemented by archaeological and documentary investigations which provided verification of the architectural findings and data on the construction chronology.

The initial task of the study process was to assemble and catalog as many documents concerning the Office of the Depot Quartermaster and the Yuma Crossing as could be located within the time and funding limitations established by the scope of the project. A considerable amount of published and unpublished data on the subject was located over a period of about four months. Although it is believed that most of the cataloged and previously known documents concerning the Office of the Depot Quartermaster were located and reviewed, the authors are of the opinion that a wealth of undiscovered documents and photographs remains unknown. Most of the documentary data utilized in this report has been viewed by other investigators; however, until this time it has not been studied specifically for its architectural content.

In this report a number of primary documents are quoted verbatim, with the document identified by a date key referenced to the bibliography. Although the Quartermaster Depot was constructed and occupied well within the era of photography and was visited by many travelers, the authors were disappointed that they did not find more early photographs of it. The research documents utilized by the authors were generally either xerographic copies or transcriptions of original documents. The copies of some of the original documents are only marginally legible, either because of the quality of the original document or the copying technique. The Caperton transcriptions of original documents are assumed to be accurate; however, the transcriptions contain missing words (words which could not be deciphered by Caperton) and misspellings. The misspellings may have been introduced in the transcriptions or may occur in the original documents. When a transcription or original document has been quoted in this report, it has been faithfully reproduced with spelling errors.

In order to evaluate the various historical documents, e.g., photographs, maps, letters, and so forth, that were obtained, a subject card reference system was established. Each document was assigned a catalog number and reviewed for historical information pertaining to particular elements of the Yuma Crossing. This card reference system was also useful in organizing events in a chronological order, and this arrangement is reflected in Chapter 2, "Construction History."

A large amount of information on the various elements of the Yuma Crossing was located, but only data relevent to the Quartermaster Depot is contained in this report.

Although this project was initially designed as an architectural study, it became apparent during the course of the field investigations that the project results could be

288

enhanced by a limited archaeological test excavation program. Consequently the historical architects engaged Dr. Lyle Stone (Archaeological Research Services, Incorporated) to excavate test units at specific locations in order to define several features which could not be identified by other research.

The architectural field work involved three principal procedures: (1) inspecting and evaluating above-ground construction and below-ground construction which was revealed by the excavations conducted by the archaeologist; (2) recording the "as-found" conditions of the building; and (3) gathering various construction material for analysis and identification. The field-recorded data, which included measurements and photographs of the building, was subsequently translated into Historic American Buildings Survey drawings.

Although this report is primarily concerned with the original construction of, and modifications to, the Office of the Depot Quartermaster and the interpretation of the building as a historic resource, it also summarizes the sequence of events leading to the Depot's establishment. The scene is set with a brief history of the Yuma Crossing and a description of the project area. Excerpts from historic documents trace the construction sequence of the Office, and the existing conditions of the building are recorded and presented in measured drawings, photographs and verbal descriptions. Documentary, architectural and archaeological data are integrated to form conclusions about the dates of construction of various architectural elements and the influences which brought about the changes in the building. And finally, the historic preservation measures are examined and priorities are established for restorative and intepretive actions.

1 ENVIRONMENTAL AND CULTURAL SETTING

PROJECT AREA DESCRIPTION

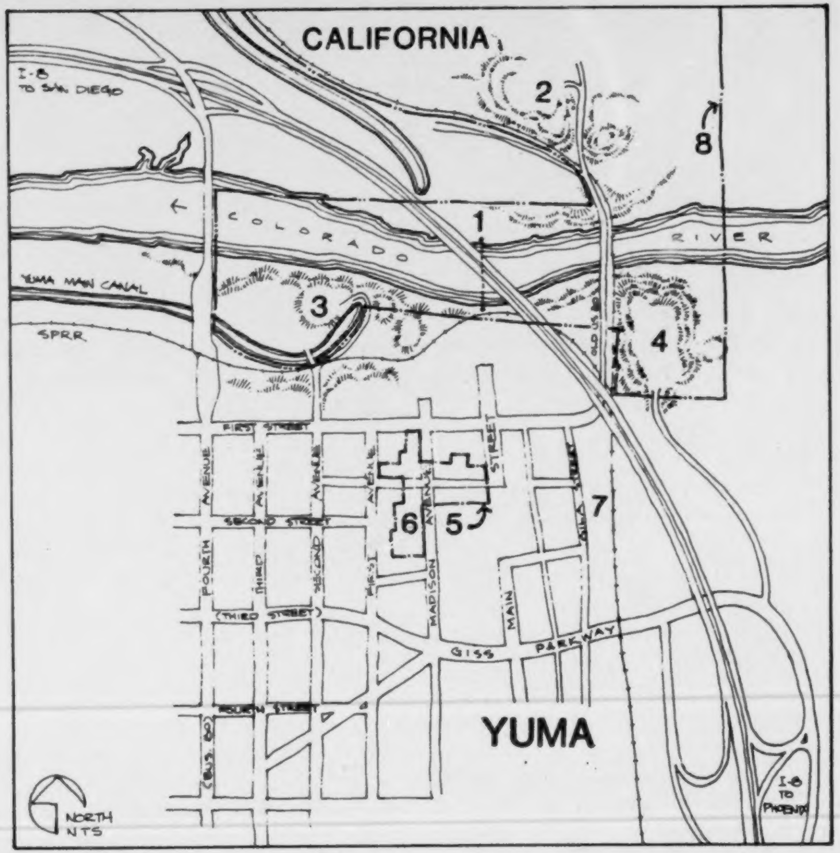
The Yuma Quartermaster Depot is located within the city limits of Yuma, Arizona, on the left bank of the Colorado River and about one-quarter of a mile west of the Interstate Highway 8 bridge. Access to the site is by way of an extension of Second Avenue north from First Street and crosses the Southern Pacific Railroad tracks and the Yuma Main Canal. The Office of the Depot Quartermaster is located near the center of the site at a distance of about 350 feet from the present river shoreline. In Territorial Days (before the construction of the Colorado River dams) the river bank was much closer to the Depot buildings.

The original Depot site is now divided by the Yuma Canal. This turn-of-the-century irrigation structure is also of historic interest. The canal and its inverted syphon, which carry water under the Colorado River from California, are listed on the National Register of Historic Places.

The historic buildings remaining from the era of the military occupation have passed into the control of several parties. Much of the original Depot site is now administered by the Yuma County Water Users' Association. The Depot Warehouse, located immediately west of the Office of the Depot Quartermaster, has been modified for use as the

HISTORIC SITES
AT THE
YUMA CROSSING

1. Jaeger's Ferry at the Yuma Crossing
2. Fort Yuma
3. Yuma Quartermaster Depot
4. Yuma Territorial Prison
5. Brinley Avenue Historic District
6. Century House Museum
7. Yuma Fine Arts Center (Old SPRR Depot)
8. Approximate boundary of the "Yuma Crossing and Associated Sites Historic District"


CALIFORNIA
I-8 TO SAN DIEGO
COLORADO
RIVER
YUMA MAIN CANAL
SPRR
1
2
3
4
5
6
7
8
OLD US 80
FIRST STREET
SECOND STREET
(THIRD STREET)
FOURTH STREET
FOURTH AVENUE
THIRD AVENUE
SECOND AVENUE
FIRST AVENUE
MADISON AVENUE
MAIN STREET
GILA STREET
GISS PARKWAY
(BUS. 80)
YUMA
NORTH
NTS
I-8 TO PHOENIX

Association's maintenance shop. The renovated east end of the Corral House[1], located immediately south of the Office of the Depot Quartermaster, houses the Association's office. The remainder of the Corral House is abandoned and in poor repair. The Water Users' Association is reported to be desirous of relocating to a different site, and the State Parks Board has indicated interest in acquiring the Association's property.

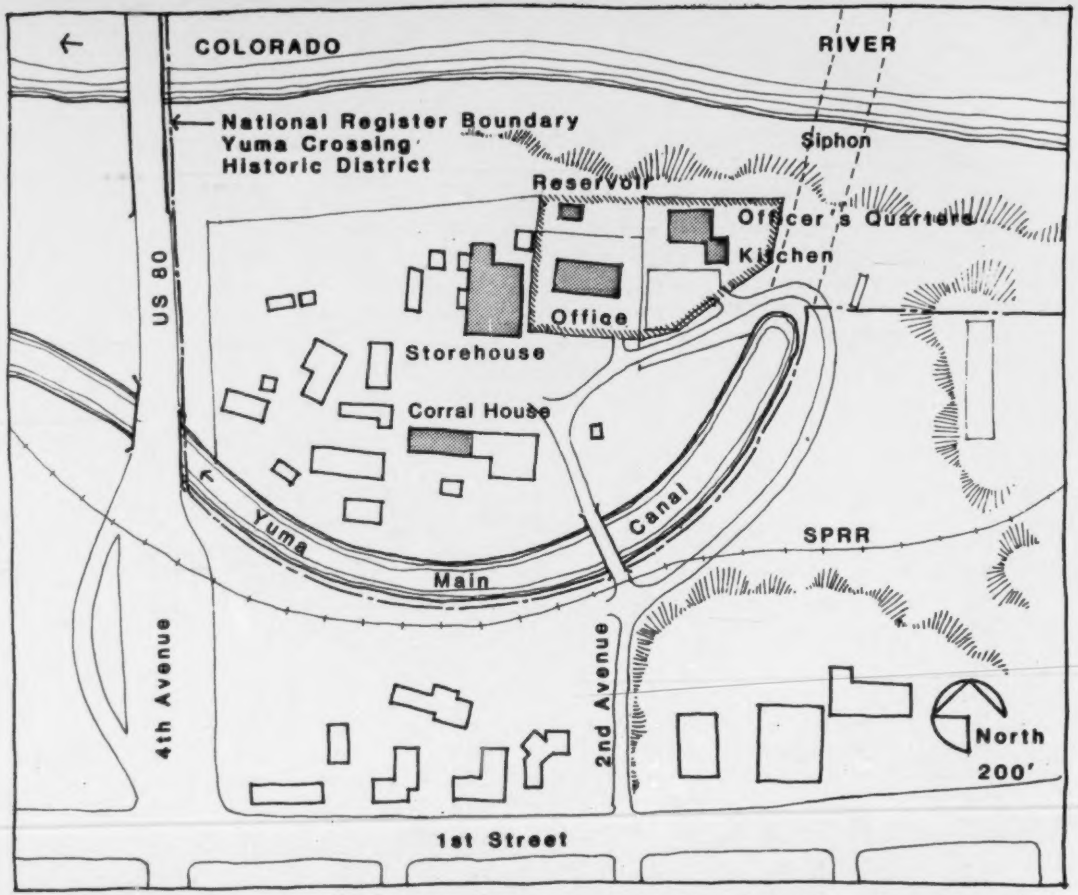
East of the Office of the Depot Quartermaster are the Officer's Quarters and Kitchen, now designated the "Custom House Museum". These two buildings are among the oldest American-built structures in Yuma. They originally served as the quartermaster's residence and kitchen, and subsequently were used by the U.S. Customs Service. Today the partially restored buildings are owned by the City of Yuma and are operated by the Yuma Women's Assistance League as a museum. The transfer of the buildings to the State of Arizona (acting through the State Parks Board) is now under consideration.

Immediately north of the Office of the Depot Quartermaster is the Depot's Water Reservoir. This historic stone and timber structure was acquired by the State of Arizona from the Department of the Interior in 1981 and is now a part of the park property. Other historic resources may be present in the park, and the entire Depot deserves a thorough documentary, architectural and archaeological investigation.

The acquisition of the Custom House Museum and the Water Users' Association property by the State Parks Board would place all of the historic resources of the Depot under a single administration and make them available for integrated interpretation and public visitation.

The Quartermaster Depot, in association with Fort Yuma, is one of the most historically significant resources of the City of Yuma and, indeed, of the Southwest. The Fort, located immediately across the Colorado River on the Quechan Indian Reservation (in

[1] There is some confusion regarding the historic name and function of this building. Caperton refers to it as "Teamster's Quarters." The 1877 plot plan labels it "Granary" (No. 10) and another building (No. 8) as the "Teamsters Quarters." In this report the name "Corral House", which is descriptive of its location, is used. The building contains a number of equal-size rooms in a linear arrangement, each with a fireplace.


←
COLORADO
RIVER
National Register Boundary
Yuma Crossing
Historic District
Siphon
Reservoir
Officer's Quarters
Kitchen
Office
Storehouse
Corral House
US 80
Yuma
Main
Canal
SPRR
4th Avenue
2nd Avenue
North
200'
1st Street

MODERN VICINITY MAP OF THE YUMA QUARTERMASTER DEPOT SITE. Existing historic buildings shown with shading.

California), merits an in-depth documentary, architectural, and archaeological investigation. As a fall-out from the study of the Office of the Depot Quartermaster, the authors have collected important documents relevent to the Fort, and they are of the opinion that the Office of the Depot Quartermaster, while an important historic resource in itself, has much greater significance when considered in context with the total Depot and Fort Yuma.

A short distance east (upstream) from the Depot is the Yuma Territorial Prison State Historic Park. Constructed on a bluff overlooking the confluence of the Gila and Colorado Rivers in 1876, the Arizona Territory Prison was to become one of the infamous landmarks of the Southwest. Nearby are the Century House Museum, the Yuma Art Center, and the Brinley Avenue Historic District.

HISTORY OF THE YUMA CROSSING

The narrative of the Yuma Crossing commences in prehistory when Indian trails converged at this natural crossing of the Lower Colorado River. Recorded history of the locale begins in 1540 with the arrival of the Spanish explorers Hernando de Alarcón and Melchior Díaz, and continues with the missions and explorations of Father Eusebio Francisco Kino from the late 1680's to 1704 and Fray Francisco Garcés and Captain Juan Bautista de Anza in the 1770's. Kino, on his 1702 expedition, determined the latitude of the confluence of the Colorado and Gila Rivers. His 1702 map, published in 1726, is probably the first to record the reckoned location of the mouth of the Gila River and the Yuma crossing.[2] Garcés founded the Franciscan Mission Purísima Concepción at the Crossing in 1779. A presidio and colony were established two years later, but were destroyed by the Yuma Indians on July 19, 1781.

[2] Ernest J. Burns, S.J., *Kino and The Cartography of Northwestern New Spain*, Arizona Pioneers Historical Society, Tucson, Arizona, 1965.

EARLY
EXPLORATION ROUTES
AND THE
YUMA CROSSING

- ✝ Mission Purísima Concepción - 1780
- ⬢ Fort Yuma - 1850
- ▲ Yuma Quartermaster Depot - 1864
- ◆ Yuma Ferry - 1848
- ● Port Isabel

A. Diaz and Alarcón - 1540
Oñate - 1605
Kino - 1701

B. Kino - 1699

C. de Anza - 1774

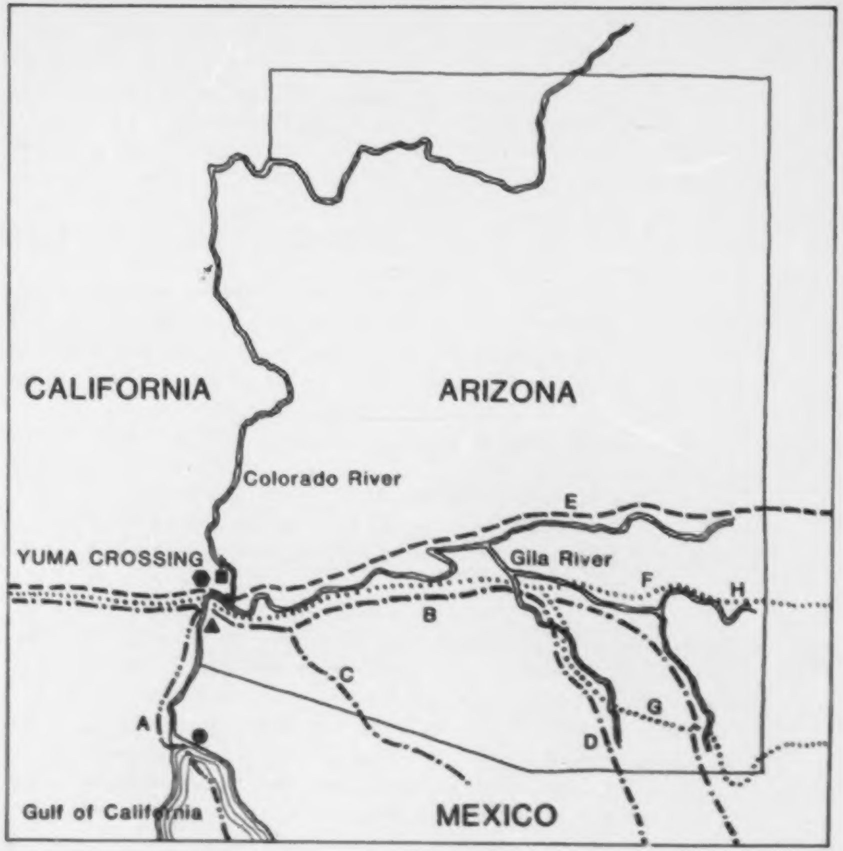
D. Garcés - 1775

E. Pattie - 1826

F. Kearny - 1846

G. Cooke - 1846

H. Gila Trail, Gold Rush of 1849

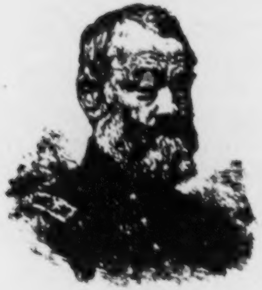

CALIFORNIA
ARIZONA
Colorado River
YUMA CROSSING
Gila River
E
F
H
B
C
G
D
A
Gulf of California
MEXICO

The American fur trappers Sylvester and James Ohio Pattie, trapping along the Gila River, arrived at the Colorado River and crossed into California in 1827. By 1846 the Gila Trail was a well-known route across the Arizona desert, having been used by Young, Robidoux, Pryor, Jackson, Waldo, Walker and other adventurers. These mountainmen's knowledge of Arizona geography made them valuable guides to the U.S. Army during the Mexican War (1846-48). Kit Carson and Antoine Robidoux guided General Stephen Kearny's Army of the West and Antoine Leroux and Pauline Weaver led Colonel Phillip St. George Cooke's Mormon Battalion across the Colorado River at Yuma.

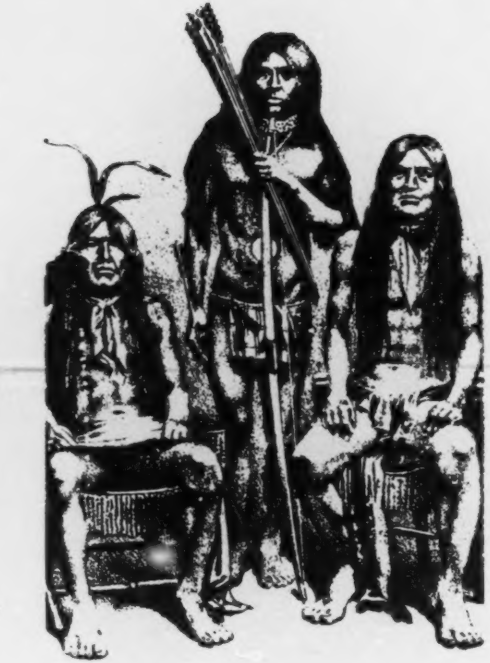
The discovery of gold at Sutter's Mill in California brought a flood of prospectors to the West. Traveling overland on several routes that converged at the Yuma Crossing, the "Forty-niners" crossed the Colorado on a ferry operated first by the Yuma Indians and subsequently by John Clanton and a small band of followers between 1849 and 1850. Clanton and his men, who had taken possession of the ferry from the Indians by force, constructed a crude fortification which they named "Fort Defiance" under Pilot Knob on the California side of the river at the site where Garces had established his mission. Early in 1850 the Indians killed Clanton and his followers, all of whom were generally held in low esteem by travelers. Later in June, 1850, Louis J.F. Jaeger re-established the ferry and the locale became known as Jaeger's Landing.

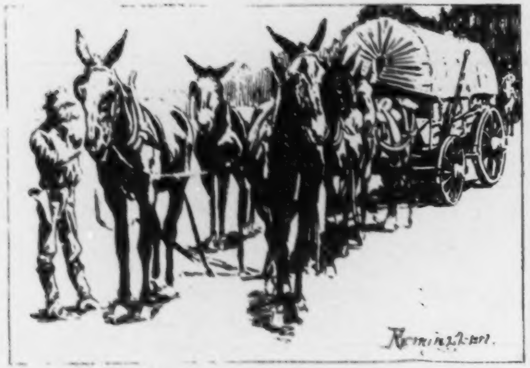
In 1849 the U.S. Army posted Lt. Cave Johnson Couts to the Yuma Crossing in command of a military escort assigned to the United States-Mexican Boundary Commission. He established a temporary position, Camp Calhoun, on the California side. Recognizing the strategic importance of the Crossing, the army sent Brevet Major Samuel P. Heintzelman,

296



Samuel P. Heintzelman
as a major general
in the Civil War.





A six-mule team and freight wagon.

A group of Yuma Indians, circa 1884.

in command of two companies of the 2nd U.S. Infantry, to establish a permanent camp in November, 1850. This camp was located below the ferry and named Camp Independence. A few months later the camp was relocated to a hill on the California side overlooking the Crossing and renamed Fort Yuma.

An attack by the Yuma Indians in June, 1851, resulted in the abandonment and destruction of the Fort, but early in 1852 Heintzelman returned with four infantry companies and one cavalry troop to recover and rebuild the Fort. Later that year Heintzelman defeated the Indians attacking the Crossing, and from that time the Fort controlled the Yuma Crossing and surrounding area. By this time the ferry had become a large-scale operation and one estimate is made that it carried 40,000 persons across the Colorado River in 1850 and 1851.

From 1858 to 1861 coaches of the Butterfield Overland Mail Company utilized the ferry (a stage station was located on the California side), and in the post-Civil War decade other stage lines continued this practice.

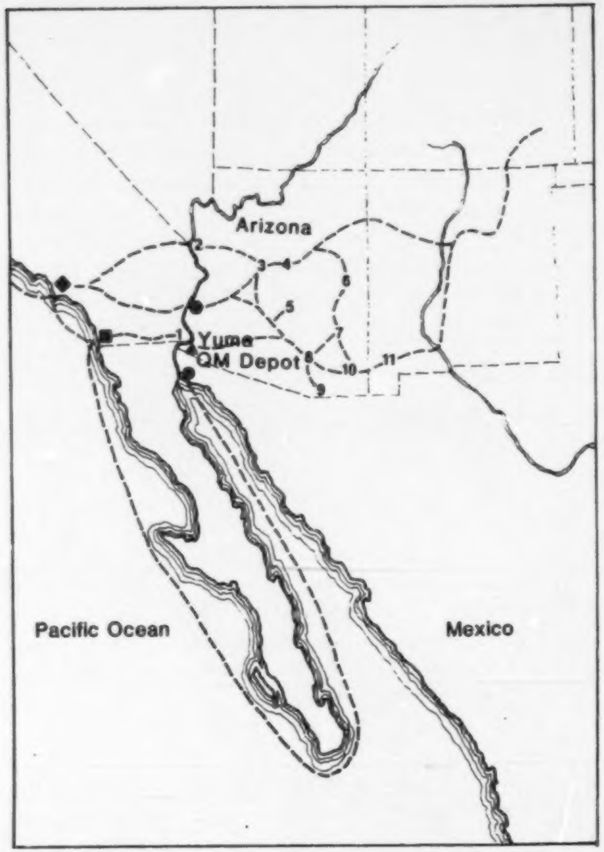
Because of the difficulty in supplying the new Fort overland through the desert, the War Department began to supply it by water. Ships arrived at the mouth of the Colorado River in the Bay of Lower California and off-loaded their cargoes onto shallow-draft river steamboats which were able to navigate the river to Fort Yuma and beyond.

In 1864 the Army built a large quartermaster depot at Jaeger's Landing on the Arizona side of the river. As the principal supply depot for the Southwest, it drew supplies from California by ship and distributed them by freight wagon to the frontier posts of Arizona, New Mexico and Nevada. Much of the original depot was destroyed by a fire in 1867, but was immediately rebuilt and remained in operation as a depot until 1883, at which time the facilities began to be used for other purposes.

MILITARY SUPPLY ROUTES BEFORE 1880

▲ Yuma Quartermaster Depot
● Port Isabel
● Ehrenberg
■ San Diego
◆ Los Angeles

1. Fort Yuma
2. Fort Mohave
3. Fort Whipple
4. Fort Verde
5. Fort McDowell
6. Fort Apache
7. Fort Grant
8. Fort Lowell
9. Fort Huachuca
10. Fort Bowie
11. Fort Bayard


Arizona
2
3
4
6
5
1
Yuma
QM Depot
8
10
11
9
Pacific Ocean
Mexico

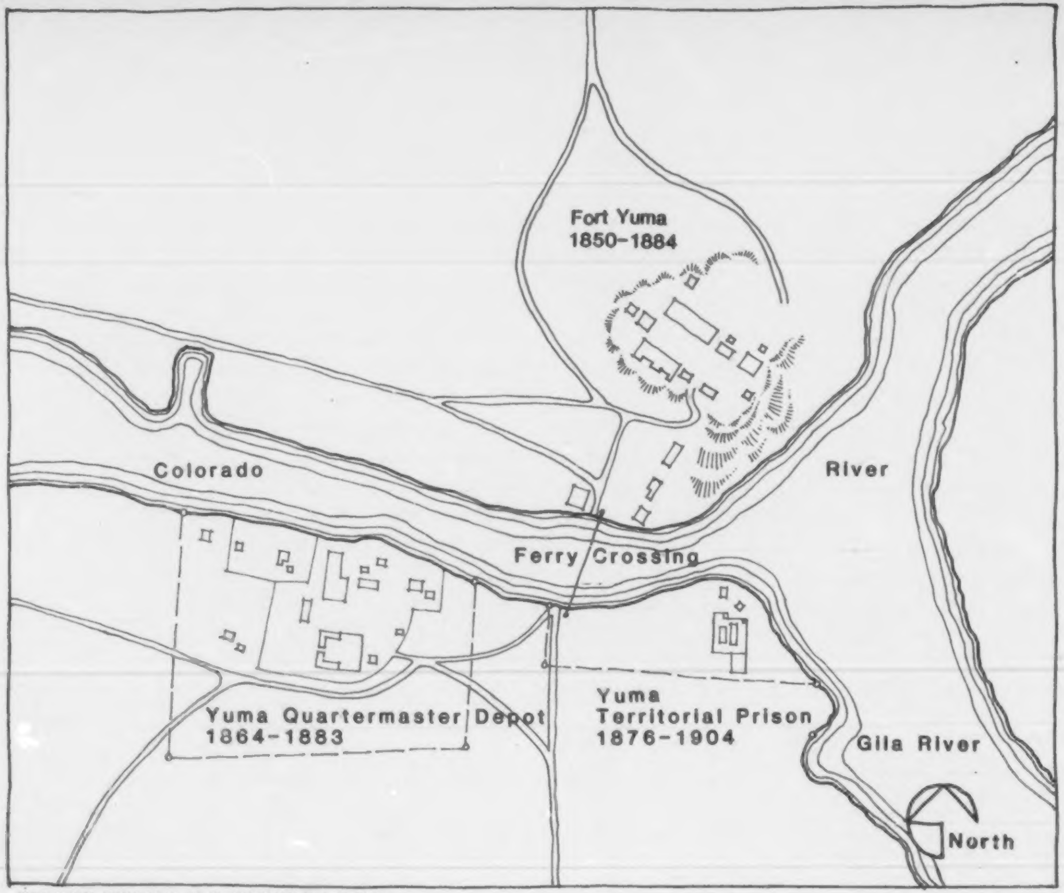
In 1877 the Southern Pacific Railroad arrived in Yuma and a railroad bridge was constructed adjacent to the ferry crossing. The ferry continued to operate for local use until the first highway bridge was built.

Fort Yuma continued as a military installation until 1884 and provided a restraining influence on the restless Indian tribes along the Lower Colorado River. Also, because of its proximity to the U.S.-Mexico border, the Fort was involved with customs and immigration activities. By 1883 the post's importance as a military installation had diminished, and at that time control of the facility was transferred to the Department of Interior.

Many of the early adobe buildings of Fort Yuma remain on the Quechan Indian Reservation. They are still in use and, although modified over the years, contain many original elements. These buildings, constructed during the 1850's and 1860's, constitute a major cultural resource that merits detailed study, preservation, interpretation and public visitation.

In 1966 the "Yuma Crossing and Associated Sites" was placed on the National Register of Historic Places under a single nomination that recognized the relationship between the historic resources at the Crossing. Although this report is primarily concerned with only one of the resources, the Office of the Depot Quartermaster, the authors are of the opinion that the significance of their subject is greatly increased when considered in context with the other Crossing resources, and that the Arizona State Parks Board should consider collaborating with the administrators of the other historic properties in developing an integrated program for interpretation and visitation of the Yuma Crossing and Associated Sites.

20


Fort Yuma
1850-1884
Colorado
River
Ferry Crossing
Yuma Quartermaster Depot
1864-1883
Yuma
Territorial Prison
1876-1904
Gila River
North

THE YUMA CROSSING AND ASSOCIATED SITES.

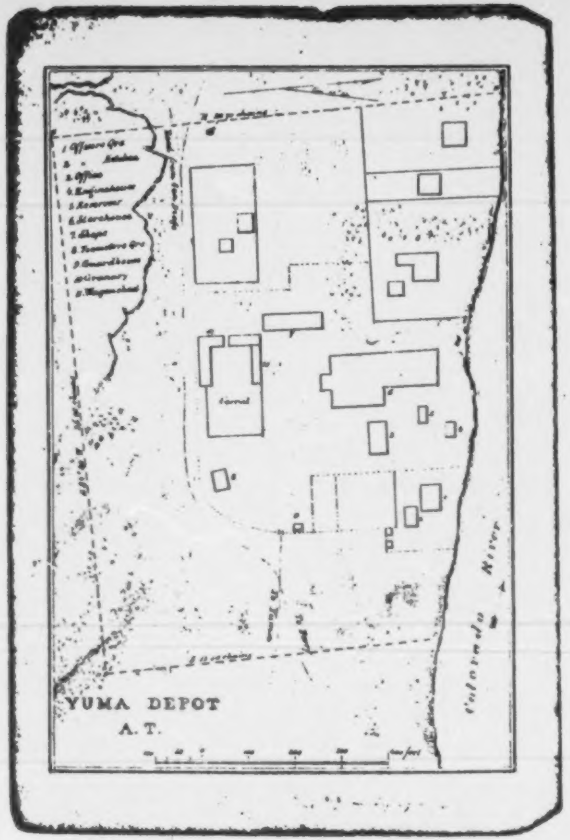
HISTORY OF THE YUMA QUARTERMASTER DEPOT

The Yuma Quartermaster Depot was established by Major William B. Hooper[3], then in the U. S. Volunteers, in 1864 on a site adjacent to the Yuma Crossing ferry landing on the Arizona side of the Colorado River. This location was selected as a supply depot because of its advantageous position as a transfer point for materiel arriving by water for distribution to the inland military posts. Military supplies from California ports were carried by several modes of transportation before arriving at their final destinations. Goods brought to the mouth of the Colorado River by ocean-going ships around the Lower California peninsula were transferred to shallow-draught river steamers for delivery to Yuma. At the riverfront Storehouse, the supplies were transferred onto cars that ran on narrow-gauge tracks through the building. The materiel was then either stored for later distribution or immediately loaded onto six-mule freight wagons awaiting at the opposite end of the building. Army escorts from Fort Yuma, located across the river, accompanied the wagon trains from the Depot on supply missions to the military outposts to protect them from Indian attack.

The original Depot buildings burned in 1867 but were soon rebuilt by Captain W. H. Hughes[4]. Additional buildings were constructed during the following years. A plot plan of the Yuma Quartermaster Depot dated 1877 identified the Officer's Quarters, Engine House, Reservoir, Office, Storehouse, Repair Shops, Teamsters' Quarters,

[3] American Sentinel, 13 Oct 1877, Vol. VI, No. 27, Yuma, A.T.

[4] Ibid.


1 Officers Qrs
Kitchen
2 "
3 Office
4 Engine house
5 Reservoir
6 Storehouse
7 Shops
8 Teamsters Qrs
9 Guardhouse
10 Granary
11 Wagon shed
Corral
Colorado River
YUMA DEPOT
A.T.

NATIONAL ARCHIVES

SITE PLAN of the YUMA QUARTERMASTER DEPOT, 1877.

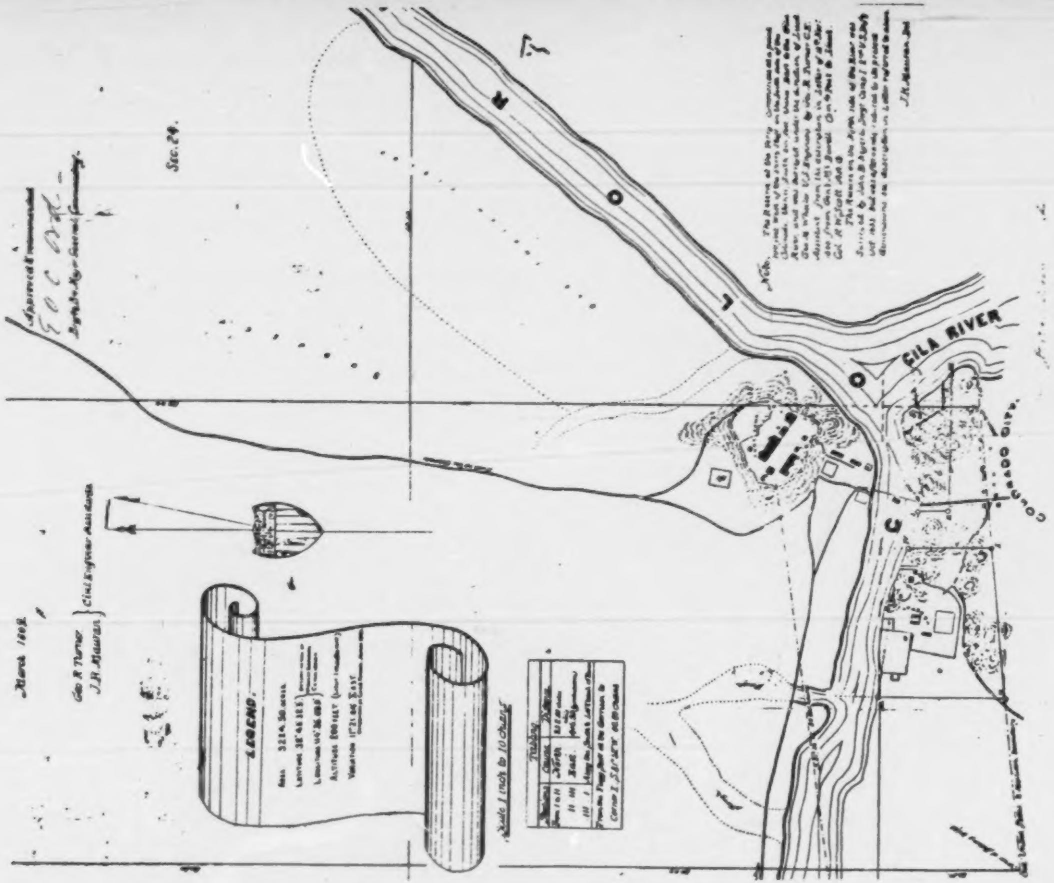
Guardhouse, Granary, Wagon Shed, Corrals, several houses, various out-buildings and fences.

The Quartermaster's Office was first located in the northeast corner of the Storehouse. The noise, heat and confusion attendant to the facility prompted the quartermaster to request a new and separate office building. The authority to construct a new building was granted on November 27, 1871, and the building was completed the following year. In 1875 one room of the building was assigned to the U.S. Army Signal Corps for use as a telegraph office and weather station.

With the arrival of the railroad at Yuma in 1877, the use of steamboats declined and the once active Yuma Quartermaster Depot was abandoned in 1883. The Signal Corps remained in the Office of the Depot Quartermaster until 1891, when the Weather Service was detached from the Corps. Civilian observers of the Weather Service remained until 1949. The building was then occupied as an office of the U.S. Boundary Commssion until 1966.

In 1908 the Officer's Quarters was converted into a custom house and immigration station and remained in this service until 1955. The building has been partially restored and now houses the Custom House Museum.

NATIONAL ARCHIVES


C O L O R
GILA RIVER
COLORADO CITY
Sec. 24.
LEGEND.
Scale 1 inch to 10 chains
March 1869
Geo. R. Turner
J.H. Mauran
Civil Engineer Assistants

MAP OF THE MILITARY RESERVATION AT FORT YUMA, California, March 1869.

306

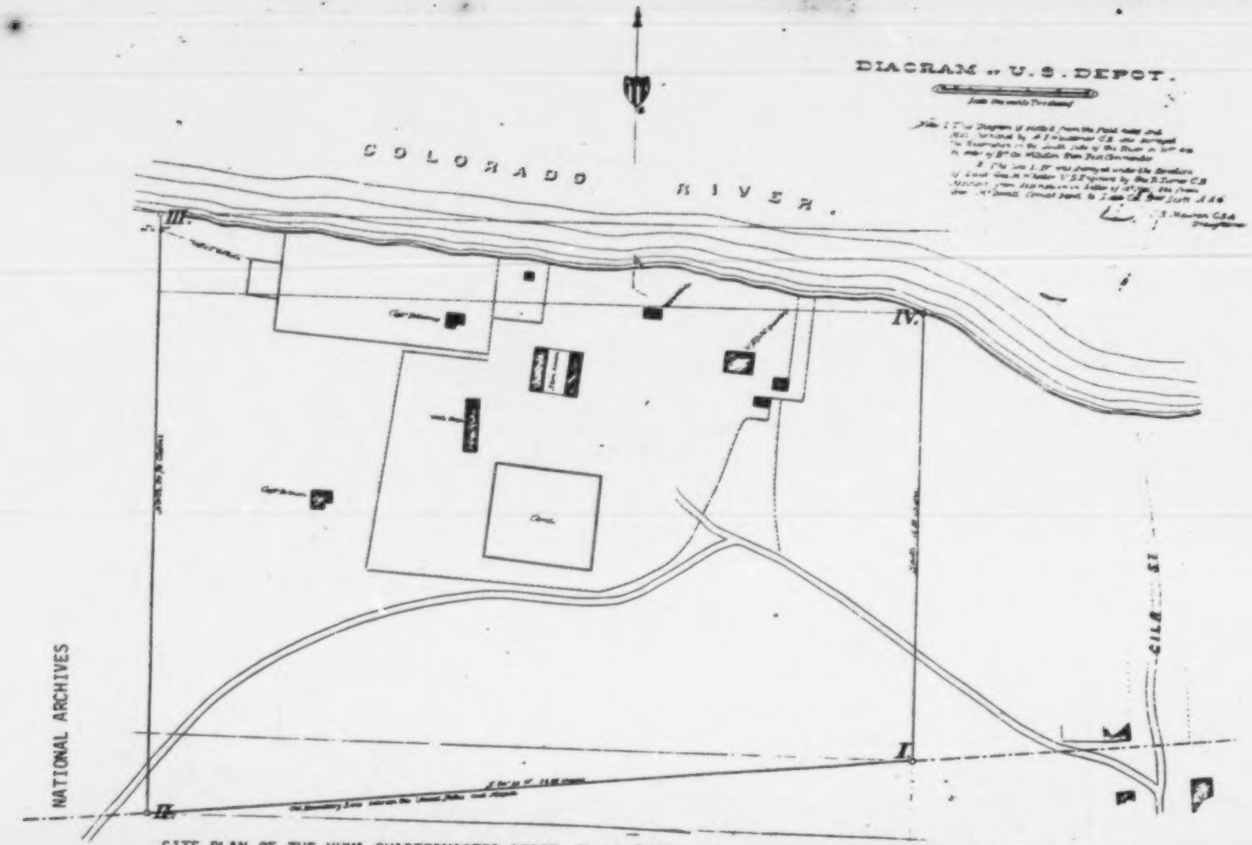
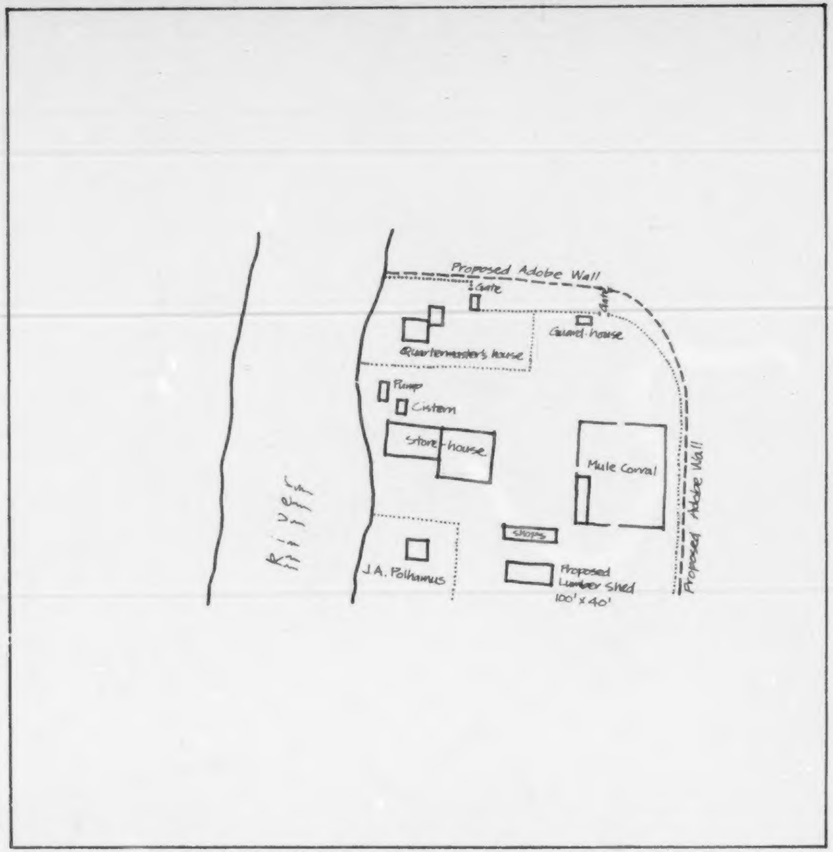


DIAGRAM of U.S. DEPOT.
COLORADO RIVER.
GILA RIVER
III.
IV.
I.
II.
Corral
C.S.A.
Draughtsman

NATIONAL ARCHIVES

SITE PLAN OF THE YUMA QUARTERMASTER DEPOT, March 1870.

A true & accurate copy of the original
map on file in this Office
Engineer Office Headquarters Dept of California
March 70

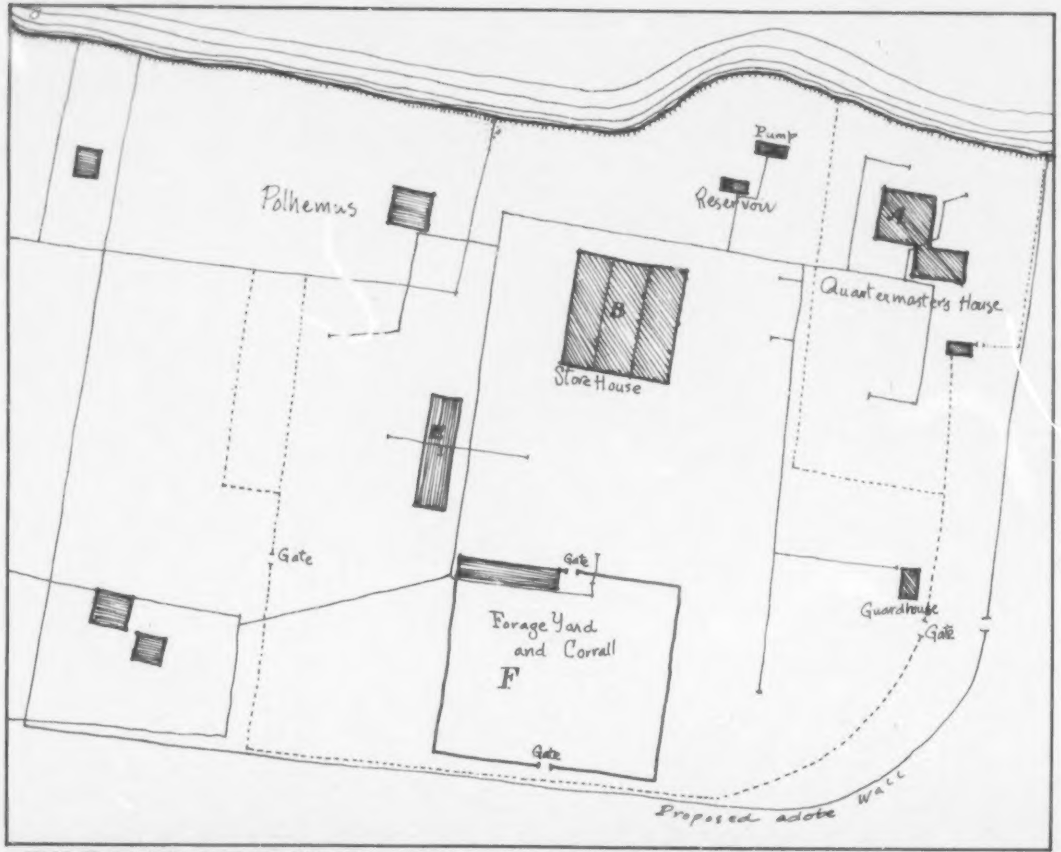

Proposed Adobe Wall
Gate
Quartermaster's house
Guard house
Pump
Cistern
Store-house
Mule Corral
River
Shops
J.A. Polhamus
Proposed Lumber Shed 100'x40'
Proposed Adobe Wall

SITE PLAN of the YUMA QUARTERMASTER DEPOT, circa 1870. (Detail copied from a photograph.)

ARIZONA STATE PARKS COLLECTION

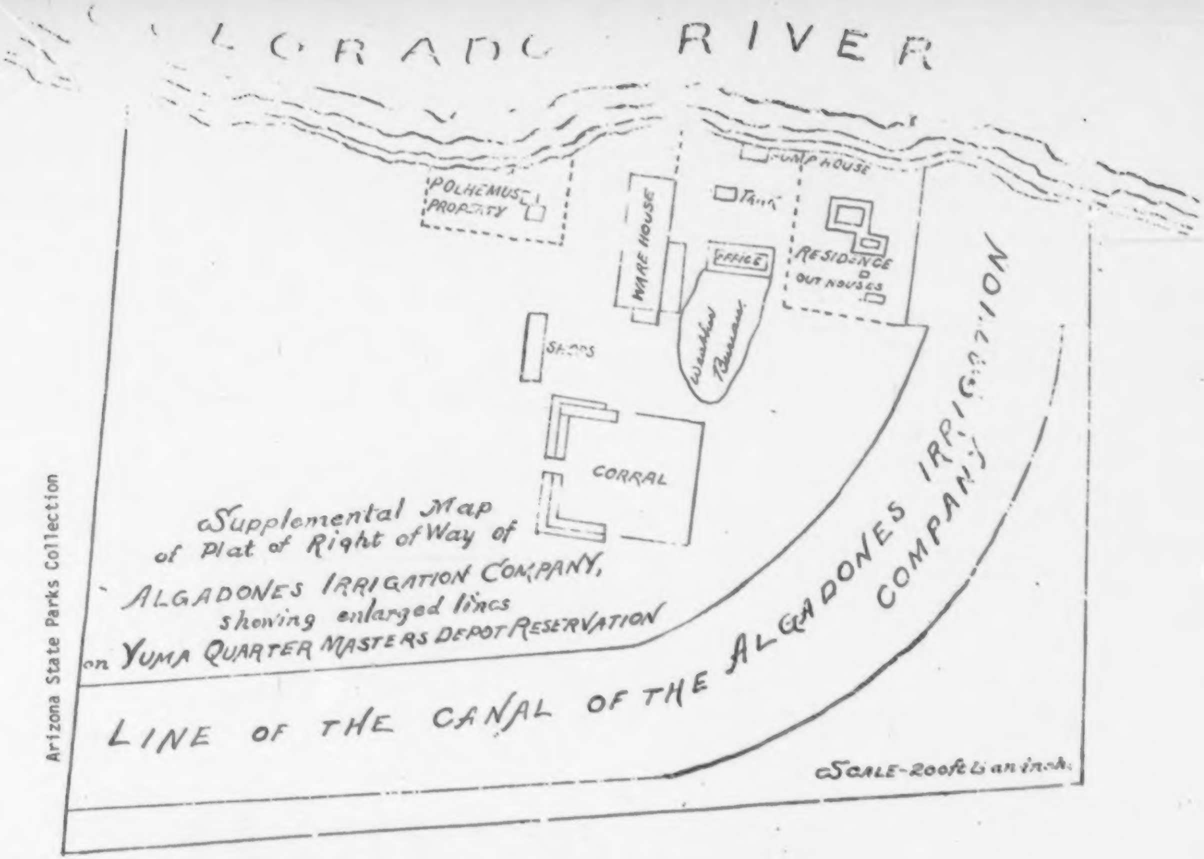
26

ARIZONA STATE PARKS COLLECTION


Polhemus
Pump
Reservoir
A
Quartermasters House
B
Store House
E
Gate
Gate
Forage Yard and Corrall
F
Gate
Guardhouse
Gate
Proposed adobe wall

27

"PLAT OF THE YUMA DEPOT RESERVATION" Surveyed by R.B. Kelly, August 13?, 1871. Traced from a photocopy.


LORADO RIVER
POLHEMUS PROPERTY
PUMP HOUSE
TANK
WARE HOUSE
OFFICE
RESIDENCE
OUT HOUSES
Weather Bureau
SHOPS
CORRAL
Supplemental Map
of Plat of Right of Way of
ALGADONES IRRIGATION COMPANY,
showing enlarged lines
on YUMA QUARTER MASTERS DEPOT RESERVATION
LINE OF THE CANAL OF THE ALGADONES IRRIGATION COMPANY
SCALE-200ft to an inch.

Arizona State Parks Collection

28 Date of Map about 1890.

2 CONSTRUCTION HISTORY

The following entries are extracted from historic documents which make specific reference to the Office of the Depot Quartermaster. They summarize and chronologize construction data about the building.

Yuma Depot A.T. Aug. 7th 1871

7 Aug 1871 Lt. Col. C.H. Tompkins
Chf. Qm. Dept. of Arizona
Drum Barracks, Cala.

Colonel:

I enclose herewith a ground plan of the office and storehouses at this depot, marked "A", and beg to submit the following facts in relation thereto, which in my opinion should be remedied with the least practicable delay.

As will be observed, the office is in the North-western corner of the building, with its north side facing the landing on the river, where all stores by water are received and shipped; its west side is the middle storehouse; its south side, the eastern storehouse; and the east faces the yard of the depot.

On the north, the noise of arrivals and departures of boats and of shipping and receiving stores, with the bustle and confusion incident thereto, comes directly to the occupants of the office through the windows which of necessity are open most of the year, being the only source of ventilation save the windows on the East. On the West, the noise of the storehouses, piling and unpiling boxes, hammering, nailing, opening and closing boxes, of the car, heavily laden being rolled in and out, and the heavy tramp of the labourers going to and fro, is continuous.

All this is repeated on the south side, in the commissary warehouses, with coopering of barrels and only a thin lath partition between.

Below is the cellar and the same noise comes through the floor.

Overhead is no ceiling, and only a thin shingle roof through which the heat of the sun easily reaches the room and greatly increases its temperature, and there are no joists to which a ceiling can be put.

Added to all this, the breezes on which alone we rely for comfort in this climate are from the south and southwest which sides are wholly shut by the warehouses.

All in all, a more unsuitable and uncomfortable office for a climate like this, where the heat is terrible, could scarcely be devised. The average temperature since I have been here is from 104 to 114, with little or none of the breezes outside, and as a place of business it can well be compared to an oven or steam bath.

Other buildings, constructed with some consideration of comfort, arranged so as to admit free currents of air are comparatively comfortable.

It seems to me, that at a depot like this suitable office for the prompt and effective transaction of business are essential.

I am therefore induced to urgently and earnestly recommend, and request authority to make the following additions, alterations, and repairs to the office of this depot, viz, to extend the office eastward by an addition 80 ft by 26 ft, as shown in the accompanying plans marked "A & B" with high ceilings (14 ft): - double roof, one of shingles and one of dirt with draft between, and plenty of openings and protected by a veranda all round. This will afford fine ventilation, and being far cooler and more quiet will afford as much comfort in doing business as is obtainable in this climate.

The cost of this will not be great, as is shown by accompanying estimate marked "C", and will, I think, rather fall within my estimated amt. than exceed it, while it will ---? office cooler for Quartermaster and Commissary, and besides it will give the large room at present used as an office, for storage purposes, where it rightfully belongs, and for which it is greatly needed, many of the stores now being piled out of doors exposed not only to the weather, but theft etc.

Such an office is, in my opinion an imperative necessity at this place and I earnestly urge its construction.

Triplicate requisitions for the material from San Francisco are enclosed.

Trusting that this application will meet with approval.

I am
Very respectfully
Yr. Obt. Svt.
J.G.C. Lee

-----------?
Depot Q.M.

Six enclosures.

312

Estimate of Cost of extension and repairs of Office at Yuma Depot A.T.

Building to be of plain adobe walls - shingle roof - plainly furnished - ceiling 14 feet high, - to constitute offices for Depot Quartermaster and Commissary.

20 M Adobes laid in wall	@ $40.	800.00
10 M Bricks	@ $45.	450.00
Carpenter work		1000.00
25 M ft Lumber as below @ $20		750.00
	Total Est Cost	$3000.00

Lumber in detail as follows

45	Joist 3 x 12 24 ft long	3240 ft
45	" 3 x 10 24 ft long	2600 ft
	Flooring - tounged and grooved	2600
276	Running ft 1 1/2 x 10 for Base	345
	Common lumber for false cieling	2000
	Surface lumber for Casings	1200
80	Rafters 3 x 6 18 ft long	2160
220	Running ft plates 2 x 6	220
220	" " " 2 x 6 for inside of verandah	220
350	" " 4 x 4 for outside of do	467
40	Posts for do 4 x 4 12 ft long	640
4	Corner rafters 4 x 6 18 " "	72

140	Rafters 2 x 6 14 feet long	1960
	Sheeting	3500
350	Running ft sills 5 or 6 x 6	870
16	Pcs Lintel 6 x 6. 12 ft long	570
		TOtal$2552.

4 Doors 3 ft 2 in x 7 1/2 ft

4 Door Frames to correspond

24 Window Sashes (12 upper and 12 lower) 9 lights Ea for glass 12 x 18

24 Window Frames - Box Frames with pullyes, cords and weights to fit sahs as above asked for -

JGC Lee
Asst QM

314

November 27th, 1871

Chief Quartermaster,
Hn'? Headquarters, Mil. Div. of the Pacific,
San Francisco, Cal.

Colonel:

Authority having been granted by the War Department, You will cause a Quartermaster and Commissary Office Building to be constructed at the Yuma Depot, A.T., cost not to exceed $3,000. Three Thousand Dollars.

Tracing of Ground Plan; Estimates of cost, and buildings materials, are enclosed.

I am, Very Respectuflly
Your Obed. Servt.

????????
Quartermaster General
Bvt. Maj. General U.S.A.

5072. of 1871
3 Each

SPECIAL REQUISTION

Headquarters Department of Arizona
Prescott A.T. October 3rd 1871
Approved George Crook
Lieut Col 23rd Infantry
Bvt Major Genl. Coms'y Dept.

Building Material

Lumber in detail as follows.

45 Joists 3 x 12 24 feet long		3240
45 -do- 3 x 10 24 " "		2700
Flooring Tongued and grooved		2600
276 Running feet 1 1/2 x 10 for base		345
Common Lumber for false dirt roof		2000
Surface Lumber for Casings		1200
80 Rafters 3 x 5 18 feet long		2160
Sheeting		2750
220 Running feet Plate 2 x 6		220
220 -do- 2 x 6 for inside of Veranda		220
350 -do- 4 x 4 for outside of -do-		467
40 Posts for Veranda 4 x 4 12 feet long		640
4 Corner Rafters 4 x 6 18 " "		72
140 Rafters 2 x 6 14 feet long		1960
Sheeting		3500
75 M Shingles	Total	25525
5 M Laths		

4 Doors 3 ft 2 inches x 7 1/2 ft.
4 door Frames to correspond
24 Window Sashes (12 Upper and 12 Lower 9 lights each for Glass 12 x 18
24 Window Frames - with Pulleys, Cords and weights to fit sash as above asked for.

I CERTIFY that the above requisition is correct; and that the articles specified are absolutely requisite for the public service, rendered so by the following circumstances: for additions alterations and Repairs at Yuma Dept.

J.D.C. Lee
Asst. QM

7 Sep 1876

Request By Signal Service for an anemometer, hygrometer, maximum thermometer and minimum thermometer.

24 Jul 1879

Inspection report provides the following description of the Office of the Depot Quartermaster.

> "Office Building: 25 ft. by 80 ft. with Portico. One story....of adobe with shingled roof....in fair condition. No material repairs have been made the building during the year. No additions or alterations are needed in the ensuing year."

4 Nov 1879

"....by order of Lt. C.A. Booth ASO erected instrument shelter north side of office elevation of instruments 5 ft 3 inches above ground."

18 Jul 1881 Ice can be purchased in Yuma for first time (5¢/lb).

24 Mar 1883 "The (instrument) shelter now in use is mounted on a frame standing on the ground ten feet distant from north window of office. Presume it was moved from window because a porch 10 feet wide extends around building in which offices located. The side of shelter facing building is open no lattice work of any kind on this side...."

28 Apr 1883 "Post Quartermaster at Fort Yuma informed me today, officially that existing orders require all the buildings belonging to War Department at Fort Yuma and Yuma Dept to be sold; and that they will probably be sold within four to six weeks. This will require the Signal Office to be removed unless the rooms now occupied can be leased of the purchaser or else be reserved by the Signal Corp. I would respectfully recommend that the Chief Signal Officer have the whole building now occupied by the Signal Service here, reserved, if possible, for use of Signal Service. This building is known as 'OFFICE OF DEPOT QUARTERMASTER' and contains three rooms, two largest of which are occupied by the Signal Service. It will be difficult to obtain office room elsewhere in Yuma in a building with shingled roof and suitable for office. Majority of buildings here have flat roofs of poles and dirt through which rain percolates in winter season."

10 Jul 1883 "The location of the (Signal Service) office remains unchanged and is the best obtainable at this place. It is in the building formerly occupied for office purposes by the Depot Quartermaster at Yuma Depot. the Signal Services uses two romms of this building which is on the Arizona side of the Colorado River, about four hundred yards west of the town of Yuma and three fourths of a mile from Fort Yuma, California. No rent is paid for office; and water and furniture has been furnished throughout the year by the Quartermaster's Department. On abandoning Fort Yuma in May (1883), the Post Quartermaster transferred to the Signal Service sufficient furniture for this office. The observer gave a memorandum receipt for this...."

24 Jun 1884	"I ask for the linoleum for floor covering as the office floor is too rough to clean properly."
13 Jul 1884	"In view of these facts it would seem that measures should be taken to protect the building in which the Signal Office is located from visits by domestic animals. I have the honor to suggest the building of a fence around this building."
1 Aug 1884	"I enclose a rough sketch herewith showing the outline of the building porch and the proposed fence. If the fence turns around the entire building 24 rods will be required if placed 12 to 15 feet from the porch it would be preferable to build around the whole building. To build around that section occupied by the Signal Office, running to the wall of the office building as indicated....16-1/2 rods will be required. ...part of the building is occupied by the Quartermaster's Agent as shown by dotted lines across the building..."
25 Sep 1884	"....the erection and construction of river Gauge (completed) as ordered...."
11 Jul 1885	"I have the honor to make special request for a water cooler and ice for the months of August and September, 1885. The olla in hand crumbled to pieces a few days ago, and there is no means of which water can be kept cool enough to drink. When it's taken from the pipe is is too hot for one to bear his hand in it...."
6 Jul 1886	"The (signal) office is located in the west room of the Quartermaster's building (having been moved from the adjoining rooms)."
21 Aug 1886	"...the storehouse formerly used by the Quartermaster's Department has been selected as the most suitable building upon which to place Signal Service thermometer shelter which

it is proposed to erect at this station. The building is forty feet from the west door of this office and is connected with it by a board walk. Its roof is as convenient as the roof of the office and it has the advantage of being less steep. The building has three chimneys but they are at the eaves and never used. The wind vane is on the office and the anometer and rain gauge on the roof of the water tank... will change the anometer and rain gauge to the same roof... erect strips of wood and substantial hand railing on the roof."

22 Aug 1889

"The following estimate that you directed me to make for the painting (of the) Office.

Office	surface for green paint	1104 square feet
Office	surface for white paint	752 square feet
Porch	surface for white paint	1224 square feet

To paint the doors and windows of the other rooms of the building

add	white paint	15000 square feet

The windows shutters are not in much need of paint but it would improve the looks.

Shutters for office windows	green paint	420 square feet
Other two room	green paint	630 square feet"

12 Sep 1889

"....office repairs that the room has a surface of 1826 sq. ft.
porch 1224 sq. ft.
3080 sq. ft.
342 sq. yds.

"In this estimate the ceiling was not included. Lieut. W.A. Glassford at last inspection thought it was not necessary that it should be painted. The plastering of the cracks at the windows and doors to stop out the bats will cost about $1.00 per window or door. There are six doors and windows in the office. Sixteen doors and windows in the building. The bats should be stopped from the whole building."

14 Oct 1889 "...send herewith form 418h, list of persons invited to bid for painting windows, doors, etc (duplicate), one envelope containing bids copy of letter sent out asking for bids, and letter directing that bids for cleaning office walls, painting windows and doors, and plastering cracks between window frames and wall...be obtained."

15 Nov 1889 "....send herewith letter of authority, bill, and vouchers of George Duke, for cleaning, plastering and painting office room at Yuma, Arizona."

12 Mar 1891 "On the Depot Quartermaster reservation a portion of the old Engine House, in front of the Signal Office fell into the river and north end of the Blacksmith shop fell victim to the water at 2:30 a.m. of the 27th (of February). The Storerooms next to Office building was nearly surrounded by water, which had also entered the cellar and was about 3 feet deep therein."

13 May 1891 "Digging of receptacle for privy and moving necessary house for new receptacle."

17 Jan 1892 "....Chief Quartermaster at Los Angeles, California. direct(s) that all persons on this Reservation be moved off, except those having authority to remain and the only person having such authority, the QM Agent says, is the observer himself and not his family.

At the suggestion of the QM Agent, and of my own volition I have the honor to request that written authority to occupy the building as now occupied by the observer as an office and living apartments be granted to me."

16 Mar 1904 "Replying specifically to letter of Division of Accounts and Disbursements dated March 8, 1904, I have the honor to report that the following order seems the practicable one in which to complete the repairs of this station, taking into account that it is desired to take care of the smaller items first.

Door, window blind and screen repairs	$50
Hardware for the above	30.
Kalsomining inside	48.
Painting inside	50.
Shingling	285.
Repairs of gables	50.
Roof painting	48.
White-washing porch ceilings	30.
Cement porch floors	625.
Repair and casing porch posts and plates	80.
Painting outside	90.
Plastering walls outside	180.
Floors for entire building	174.

It seems necessary that the item 'White-washing porch ceilings' come after the shingling for the reason that one purpose of the white-washing is to do away with centipedes and similar insects from which there is always some danger and more or less trouble, the porch ceilings consisting of the boarding and shingling which constitutes the roof. The repair and casing of the porch posts and plates should follow the cement floors for the reason that it would then be the duty of the contractor repairing and casing the porch posts and plates to leave the porches and supports level plumb and square with the rest of the work.

The above estimates are based upon the artificial and excessive prices of lumber at $50. per thousand and cement at $9. per barrel, and I regret to have to report that there are not present indications of any break in these prices."

8 Apr 1904 "Five rooms in the Weather Bureau building here are utilized as living apartments by the undersigned."

18 June 1904 "I have the honor to report that the lowest bid for the repairs to gables, the first item is $100. This is largely due to a change in the specifications made for the purpose of securing uniformity in the completeness of the appearance of several parts of the building. The idea is, that to insure a due proportion and just correspondence between the different parts, it will be necessary to put on finish costing as above named."

21 July 1904 "Referring to previous correspondence relative to the repair of station building at this place and especially to letter of Division of Accounts and Disbursements dates June 11th. 1904, I have the honor to report that the lowest bids for plastering the walls outside and repairing porch post and plates are $240. and $75. respectively which is an increase in the first instance of $60. and in the second instance of $15. I recommend especially that if practicable the amount of $240 be authorized for plastering the walls, that the same may be completed before the sand is removed from the new cement porch floors, thus obviating the liability of the latter to receive lime stains. This is due to a rise in the cost of materials."

1 Aug 1904 "Referring to letter of Division of Accounts and Disbursements dated June 25, 1904, I have the honor to report that the records of this station show the following accounts to have been incurred and to be remaining outstanding and unpaid.

F. G. Blaisdell, Water and Telephone	$ 16.50
E. F. Sanguinetti, Oil, Brooms, etc.	10.00
F. L. Ewing, Ice	2.25
E. Rathburn, Cement porch floors	673.95
A. J. Heyl, Repairs to gables	100.00
A. J. Heyl, Laying new floors in building	174.00
C. W. Harris, Painting roof and white washing porch ceiling	77.00

The amounts of $1.00 for ink, $1.05 on cement porch floors and $1.00 on painting roof of building will remain unexpended."

8 Jun 1905 "In detail to put this work in shape so that we can receive it it will be necessary, first, to give all the white painted work another coat with the exception of the painted walls, the outside of the bathroom and the window sash and door frames, second, to set what glass he has broken or may break, third, to cover all green daube on the white, with white, and all white daube on the green, with green."

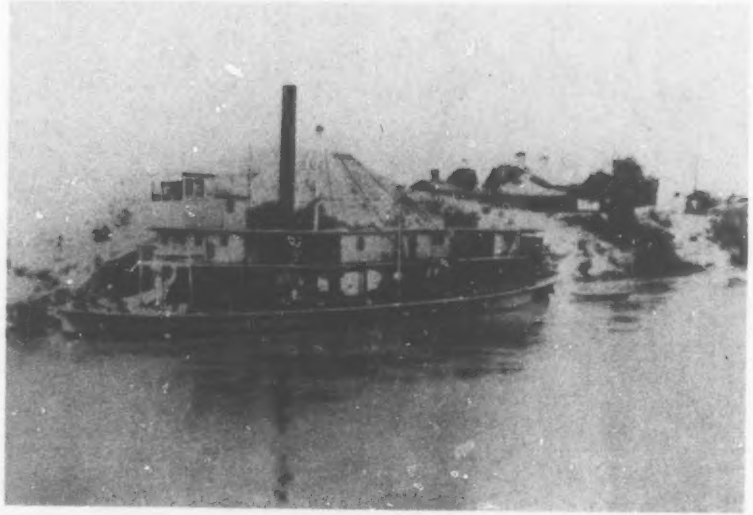
20 Oct. 1906 "I was advised by both inspectors, upon the last respective visits to this station, that two of the rooms should be fitted with cloths pressed and the kitchen should be fitted with a cupboard."

15 Mar 1906 "I have the honor to request authority to incur the expense of $10.00 to have the station front fence painted two coats, as per bid of Paul Savigne. This fence was last painted during 1903."

16 Jan 1908

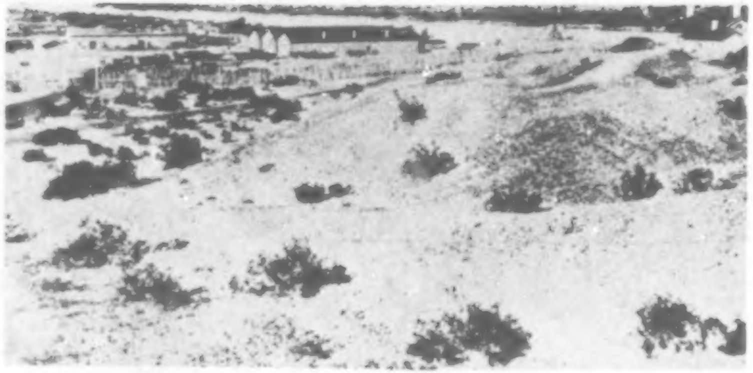
"I have the honor to report having consulted a contracting carpenter, who informs me that it would cost $375 to screen in the porch of our building here.

I consulted Mr. C.C. Parks, the only wiring electrician here, and he informed me that to wire and fir this building with lights and fan, he furnishing everything, would cost $197.65. The installation of lights and fans is much the more necessary of the two jobs because during the two months of summer it is impossible to work at night with a lamp and the early morning is the only time during which it is possible to sleep so that the working day is so short that the work gets behind."



Yuma County Historical Society

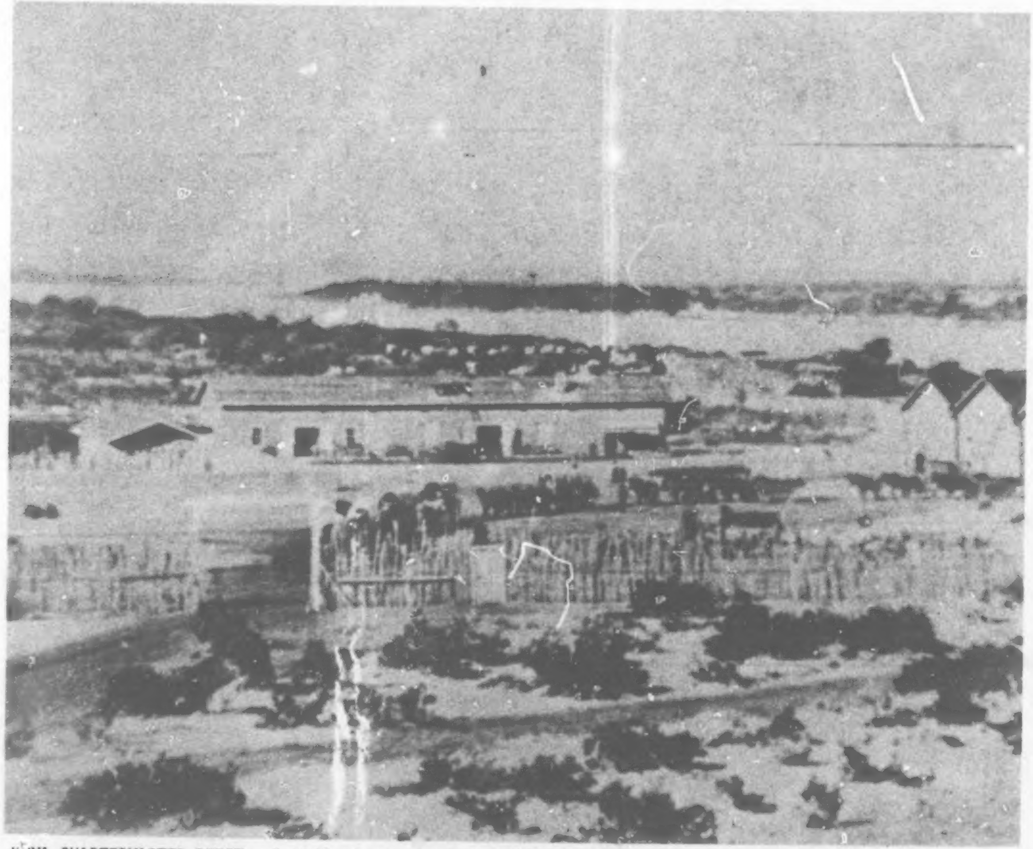
Sternwheeler steamboat
tied upstream from the
Officer's Quarters. 1904.



Arizona State Parks Collection

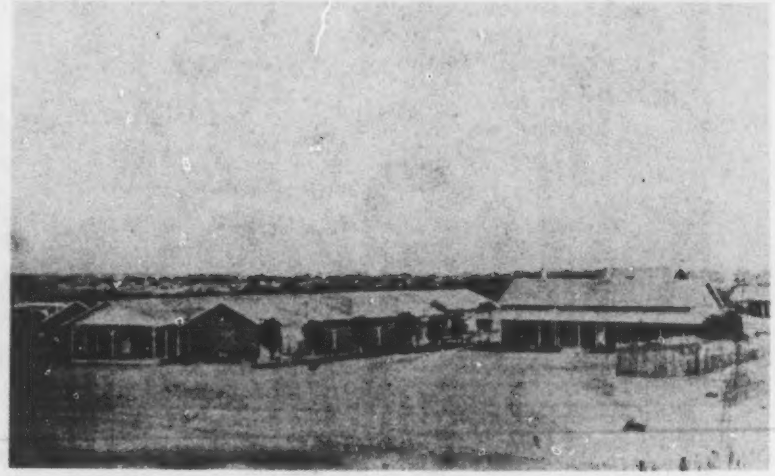
46

YUMA QUARTERMASTER DEPOT. View toward northwest, circa 1869.



Arizona State Parks Collection

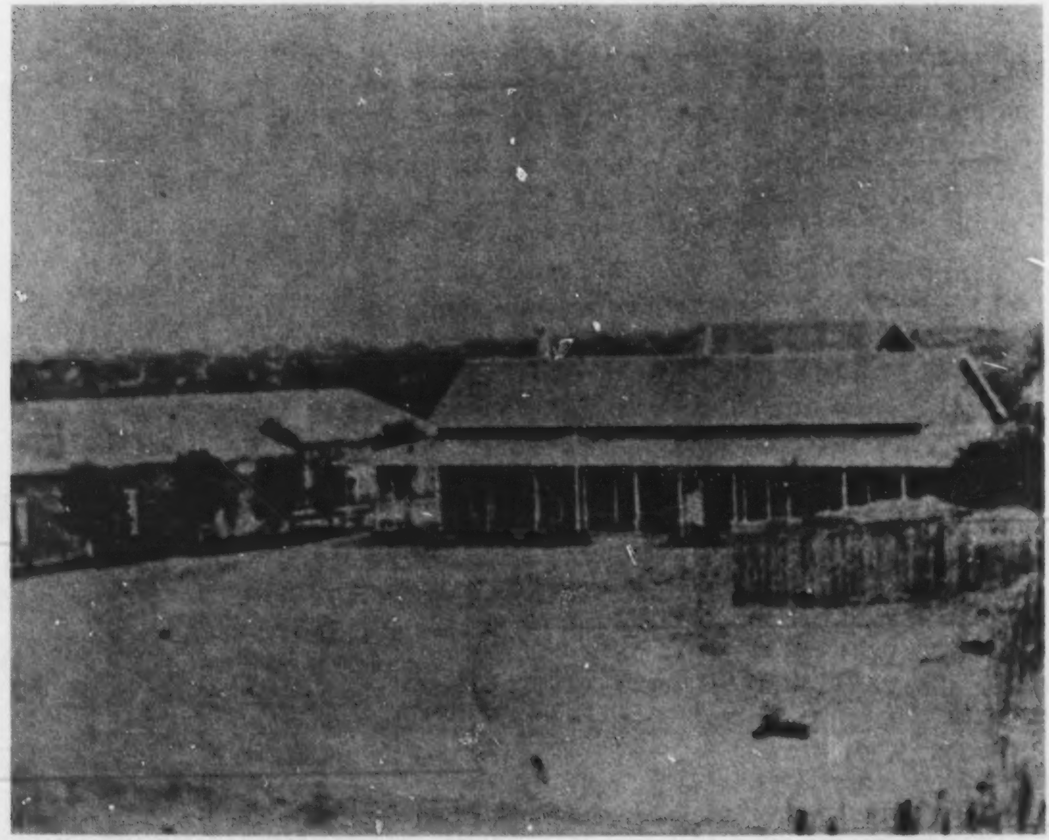
YUMA QUARTERMASTER DEPOT. Detail of view toward northwest, circa 1869. Fence is made of cottonwood branches lashed with rawhide. Six-mule wagons fall into line for the journey to outlying forts.



Yuma County Historical Society

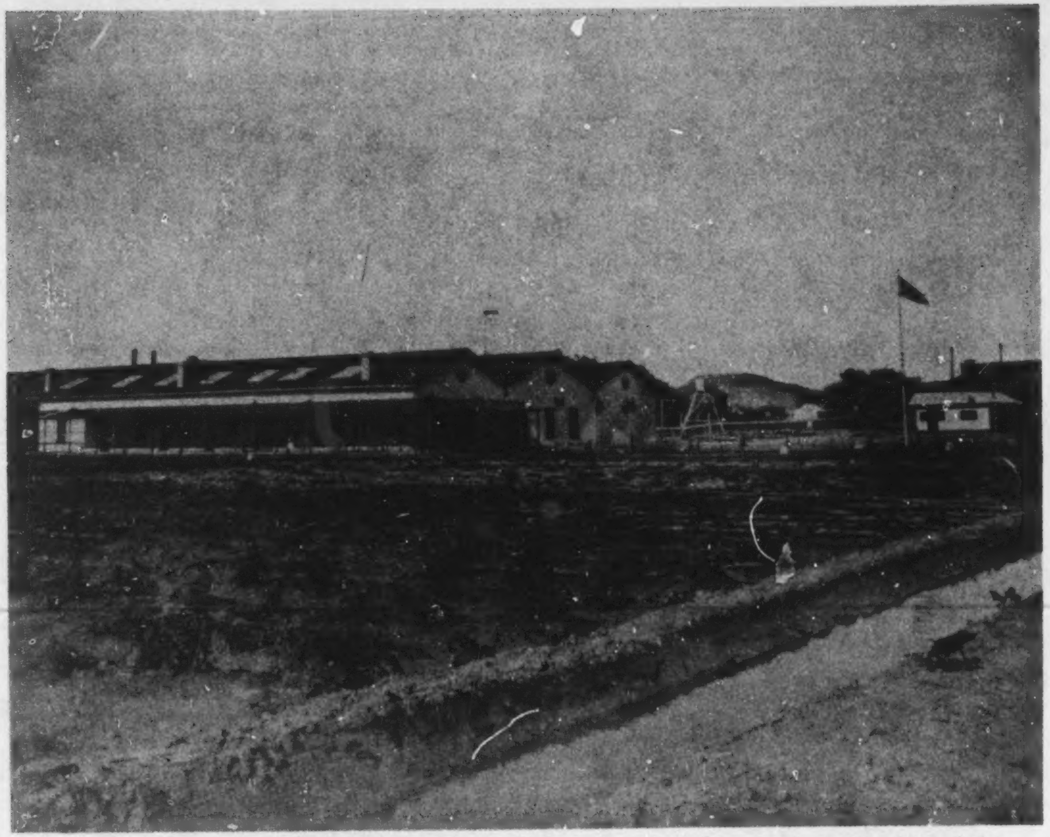
48

STOREHOUSE AND OFFICE OF THE DEPOT QUARTERMASTER. View toward northwest, 1875.



Yuma County Historical Society

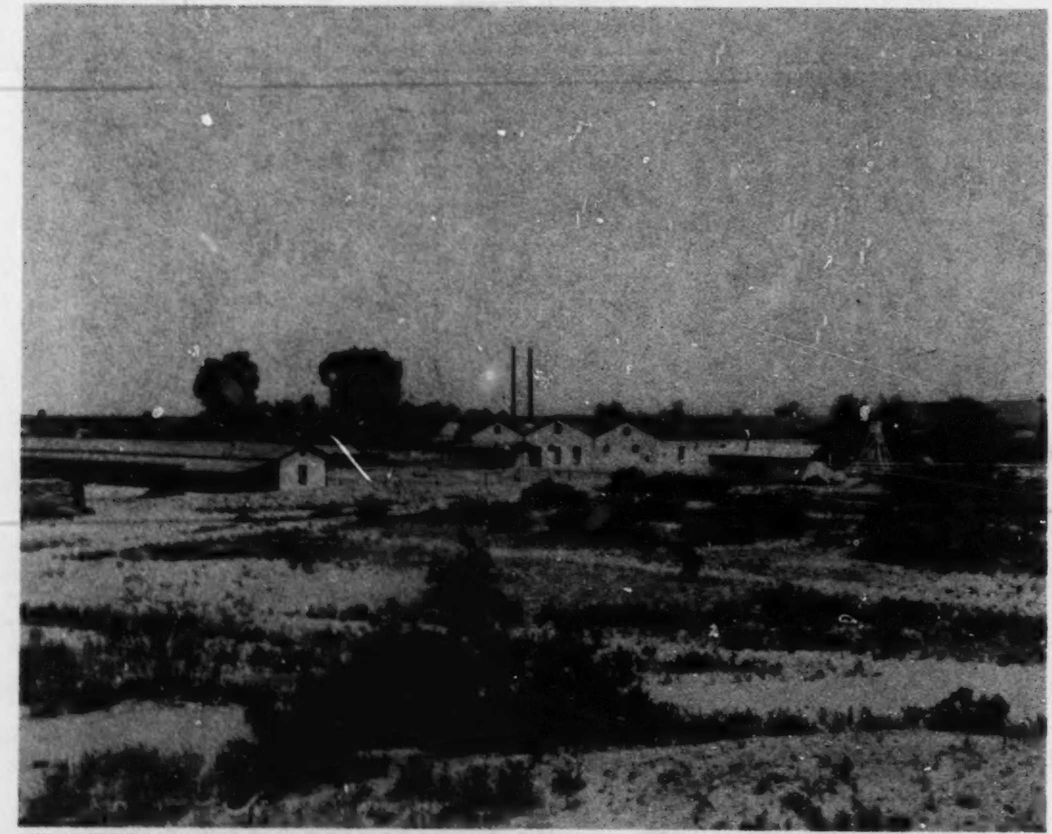
OFFICE OF THE DEPOT QUARTERMASTER. Detail of view toward northwest, 1875.



Arizona State Parks Collection

50

STOREHOUSE. View toward northeast, after 1904. Weather instrument shelter stands to the right of the Storehouse and in front of the Office building (not seen).

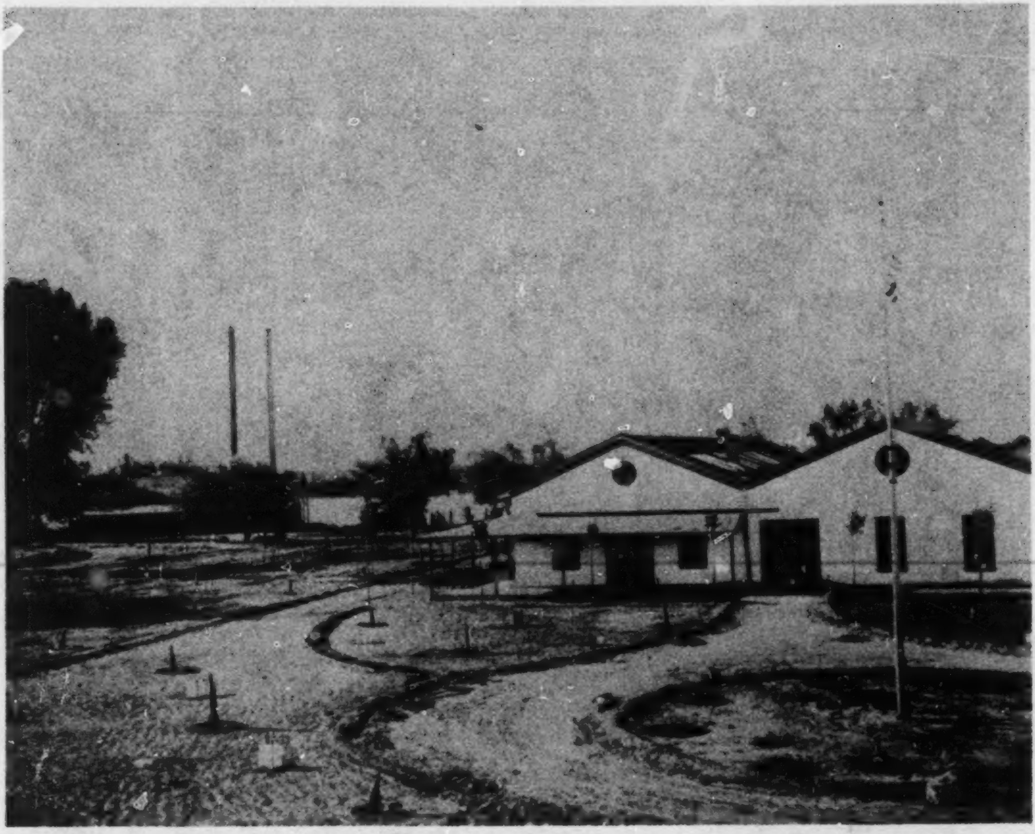


Arizona State Parks Collection

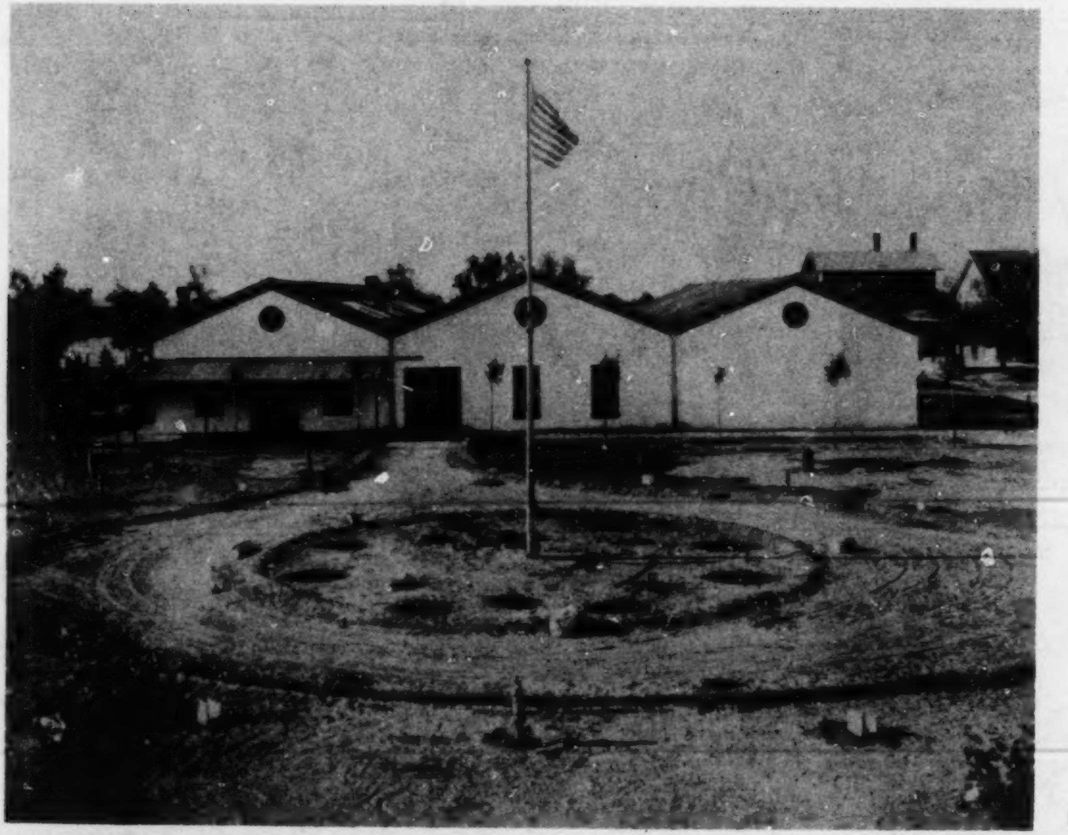
YUMA QUARTERMASTER DEPOT. View toward northwest, after 1904. Office of the Depot Quartermaster is at the right behind the weather instrument shelter.

Arizona State Parks Collection

52

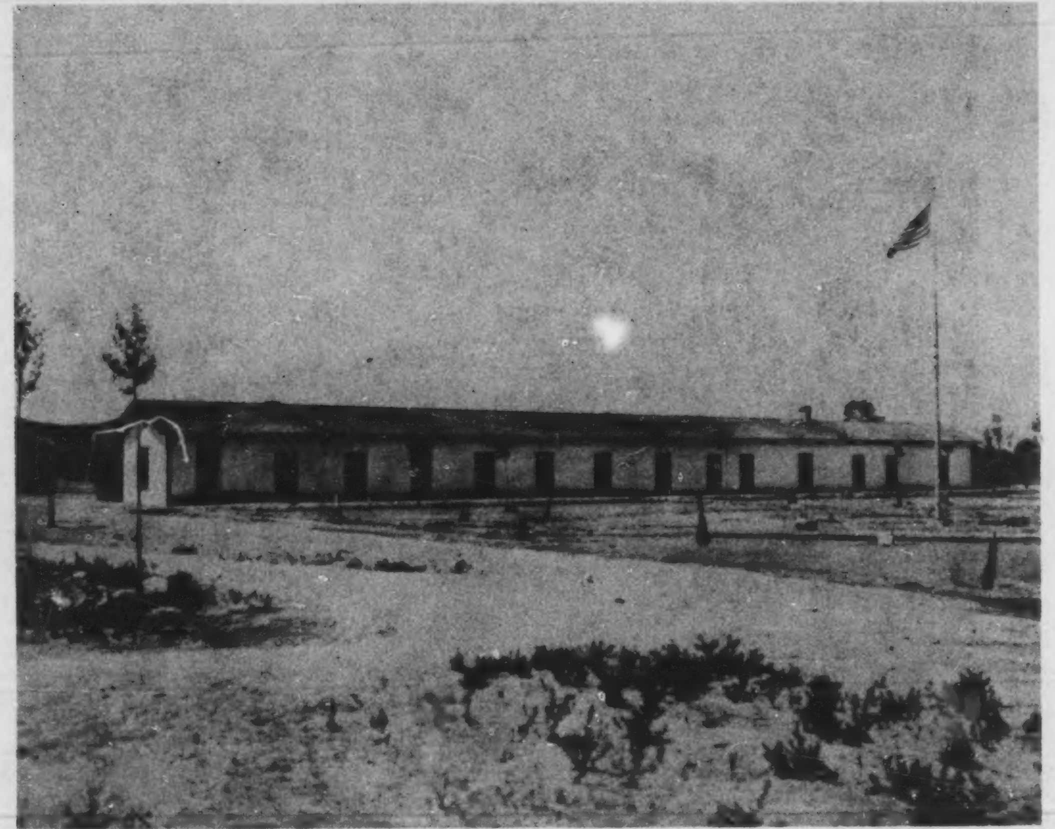


STOREHOUSE. View toward north, after 1904. Building at left may be Polhemus residence. Smokestacks in background are unidentified.



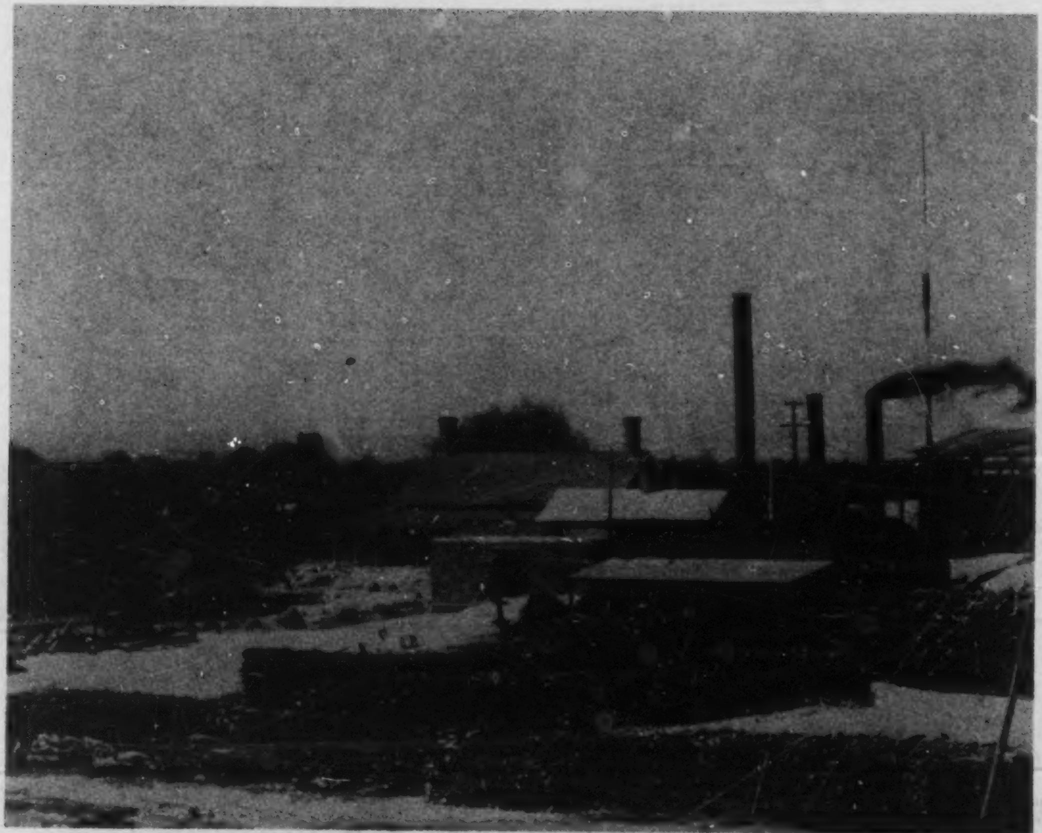
Arizona State Parks Collection

STOREHOUSE. View toward north, after 1904. Reservoir and the west end of the Office are to the right of the Storehouse. Enginehouse stacks are seen beyond Reservoir roof.



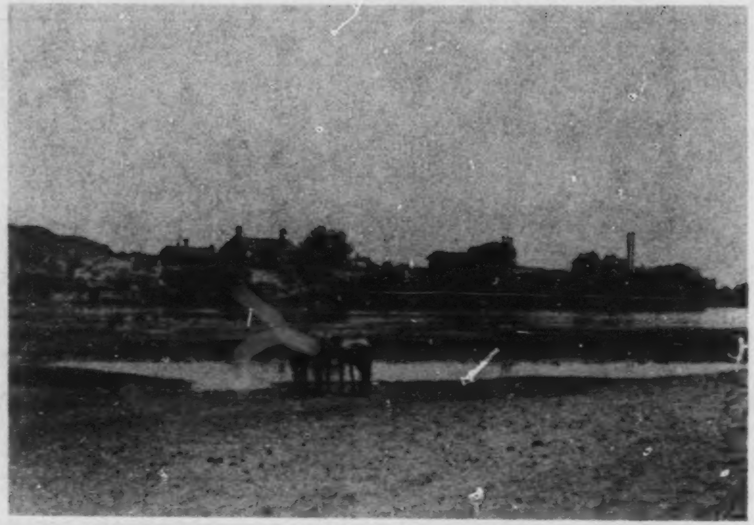
Arizona State Parks Collection

CORRAL HOUSE. View toward southwest, after 1904.



Arizona State Parks Collection

OFFICER'S QUARTERS AND KITCHEN. View toward northwest, date unknown. The tall ferry staff is at the right in the background. Function of this engine house is not known. Adobe building with arch may be the guardhouse.



56

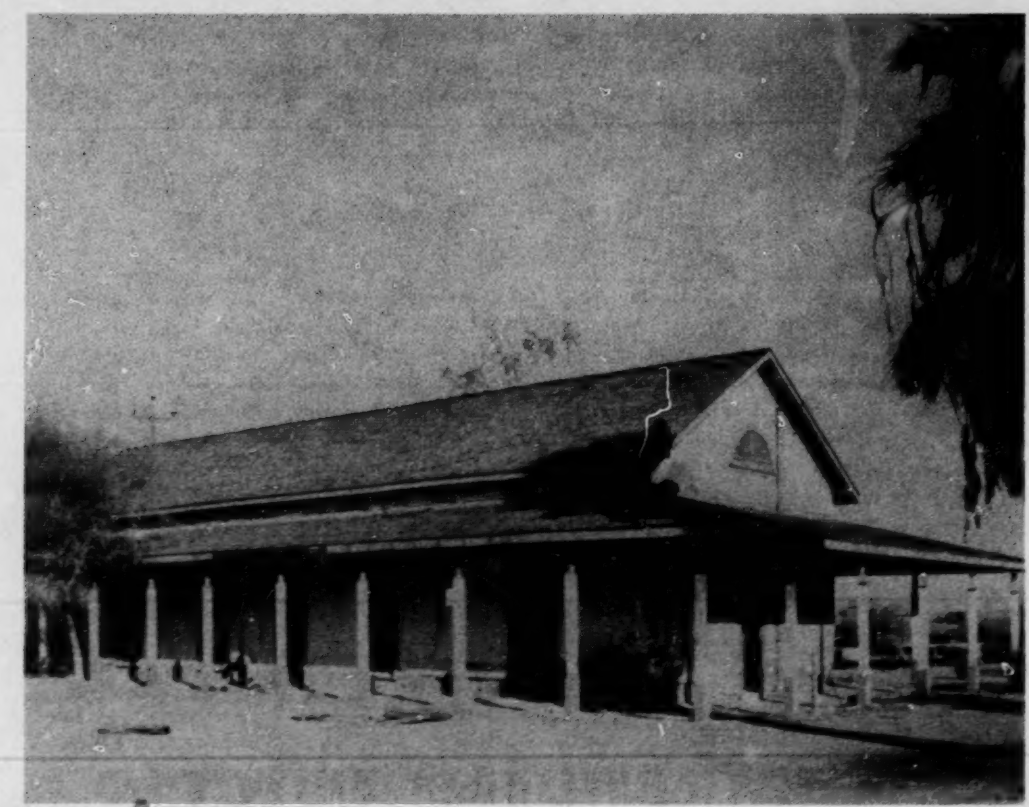
Arizona Historical Society

YUMA QUARTERMASTER DEPOT.
View toward southwest,
across the Colorado River,
circa 1904. Officer's
Kitchen and Quarters,
Reservoir, Enginehouse.

Yuma County Historical Society

YUMA QUARTERMASTER DEPOT. View toward north, 1899. Adobe-walled corral in foreground. Storehouse, Reservoir, Office and Officer's Quarters in background.

338



GADA Photo

58

OFFICE OF THE DEPOT QUARTERMASTER. View toward northwest, 1981.

3 EXISTING CONDITIONS

DESCRIPTION OF EXTERIOR BUILDING ELEMENTS

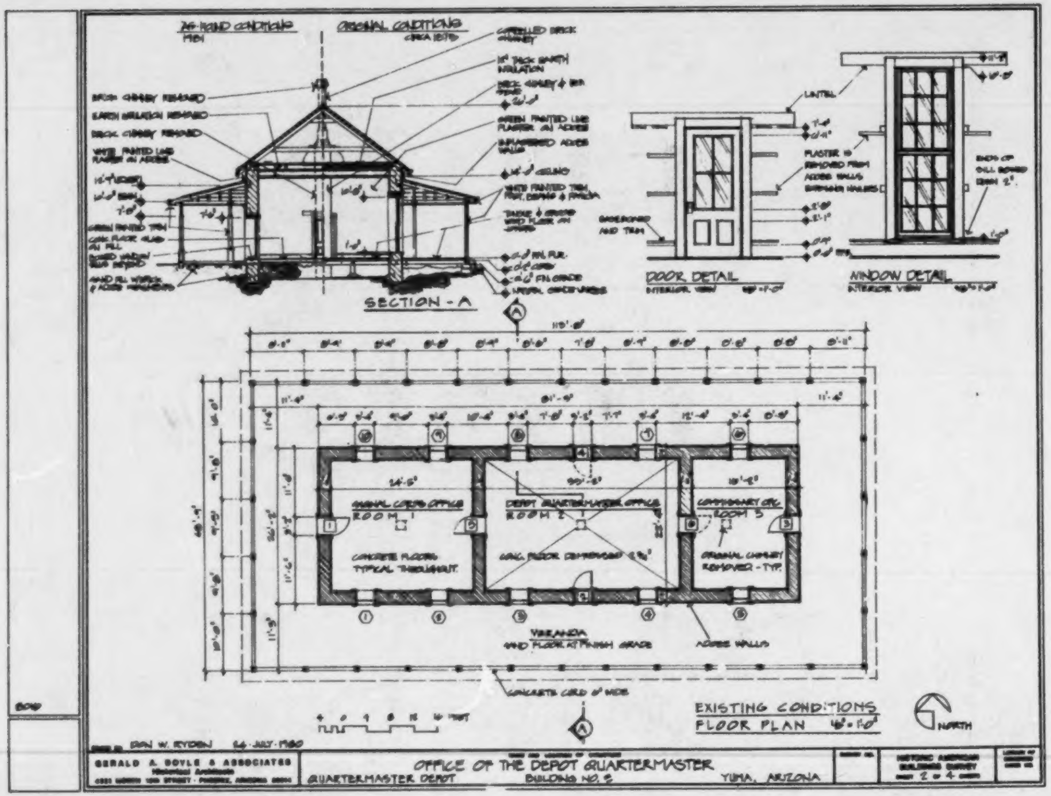
General

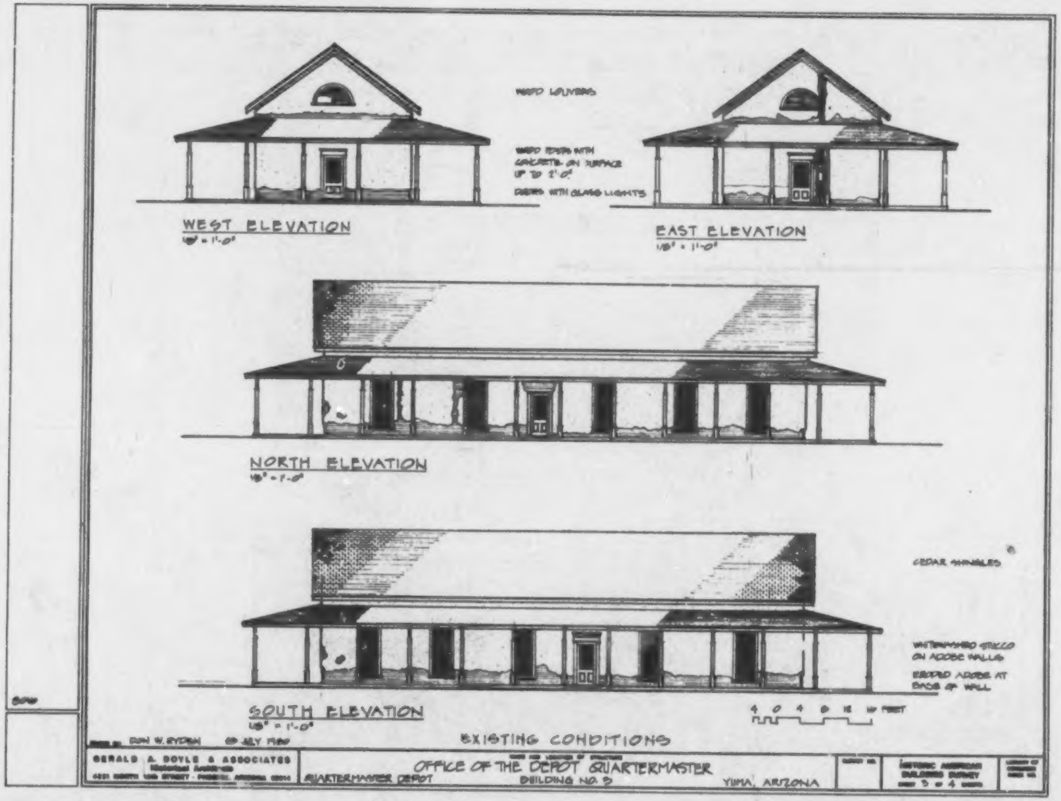
The one-story Office is rectangular in plan, 26'-2" wide by 81'-3" long in the east-west dimension, and is surmounted by a gabled roof. A hipped roof veranda, 11'-4" deep, surrounds the building. The north and south elevations of the building are identical, although opposite-handed. Each of these facades has a door and five windows. The windows are equally spaced; two on one side and three on the other side of the door. The east and west elevations are identical. Centered on each east and west wall is a single door and a semi-circular ventilator is located in the gable above the veranda roof. With the exception of the shingle roof, which was installed in 1974, the wood elements and applied finishes of the building are in poor repair.

340

Foundations

The archaeological test excavations revealed that the adobe wall was constructed in a shallow trench (less than one foot into natural grade) and that the adobe bricks bear directly upon the soil without a footing. The vertical dimension of the foundation wall, below existing grade, varies with the slope of the natural grade from about 16 inches at


SECTION - A
DOOR DETAIL
WINDOW DETAIL
ORIGINAL CORPS OFFICE ROOM 1
DEPOT QUARTERMASTER OFFICE ROOM 2
COMMISSARY OFC. ROOM 3
CONCRETE FLOORS TYPICAL THROUGHOUT
ORIGINAL CHIMNEY REMOVED - TYP.
VERANDA
AND FLOOR AT FINISH GRADE
ADOBE WALLS
CONCRETE CURB 6" WIDE
EXISTING CONDITIONS
FLOOR PLAN 1/8" = 1'-0"
NORTH
DON W. RYDEN 24 JULY 1980
GERALD A. DOYLE & ASSOCIATES
OFFICE OF THE DEPOT QUARTERMASTER
QUARTERMASTER DEPOT
BUILDING NO. 2
YUMA, ARIZONA
HISTORIC AMERICAN BUILDINGS SURVEY
SHEET 2 OF 4 SHEETS


WEST ELEVATION
1/8" = 1'-0"
WOOD LOUVERS
WOOD POSTS WITH CONCRETE ON SURFACE UP TO 2'-0"
DOORS WITH GLASS LIGHTS
EAST ELEVATION
1/8" = 1'-0"
NORTH ELEVATION
1/8" = 1'-0"
CEDAR SHINGLES
WHITEWASHED STUCCO ON ADOBE WALLS
ERODED ADOBE AT BASE OF WALL
SOUTH ELEVATION
1/8" = 1'-0"
4 0 4 8 12 16 FEET
DON W. RYDEN 29 JULY 1980
EXISTING CONDITIONS
GERALD A. DOYLE & ASSOCIATES
OFFICE OF THE DEPOT QUARTERMASTER
QUARTERMASTER DEPOT
BUILDING NO. 5
YUMA, ARIZONA
HISTORIC AMERICAN BUILDINGS SURVEY
SHEET 3 OF 4 SHEETS

ARCHAEOLOGICAL TEST UNIT 5, near the center of the north wall at the veranda floor. Note the floor joist pockets above grade and adobe bricks against the wall below grade.

ARCHAEOLOGICAL TEST UNIT 9, at the west wall at the veranda floor. This test unit revealed construction debris of adobe bricks and mud mortar in the foundation trench.

GADA Photos - 1981

62

the southeast corner to about 36 inches at the southwest corner. Sand was used for fill around the building to bring the finished grade to a level a few inches below the finished floor elevation.

The foundation wall is of the same thickness as the above grade wall, about two feet. There is no spread, or T-shaped, footing. The below-grade adobes, where encountered in the test units, were found to be in pristine condition. It is assumed that this condition is typical for the entire building perimeter, except where settlement is evident at the center of the north wall. This settlement was probably caused by leaking plumbing in the now-removed bathroom and kitchen.

Exterior Walls and Wall Finishes

The exterior, above-grade walls (and the interior walls) are built of sun-dried adobe bricks, typically 24 x 12 x 4 inches in size. The walls are two wythes thick (24 inches) and are laid with mud mortar in a running bond with headers at every third course. With several exceptions, the adobe construction is in good condition.

The exterior surface of the adobe walls is now partially covered with lime plaster. Caperton reported that he removed a one inch thick "concrete skirt (and wood baseboard) around the base of the exterior walls." Traces can still be found of the "concrete skirt" which had been installed in an attempt to arrest erosion of the lower part of the wall.

SOUTH VERANDA. View toward east. Casings are removed at the post tops. Note concrete pedestals. Casings and pedestals are not original features.

SOUTHWEST CORNER of the building has sustained damage to the plaster finish and adobe bricks.

VERANDA. Northwest corner with view toward Reservoir.

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64

Structural System

The building has adobe brick bearing walls, which originally supported wood floor joists (now removed) and an unusual arid region, double-roof system consisting of an inner flat roof (ceiling) with twelve inches of earth fill insulation (now removed) and an outer, conventionally framed gable roof. The wood floor and earth fill insulation were extant when the property was acquired by Arizona State Parks and were recorded by Caperton. The structure is in generally good condition.

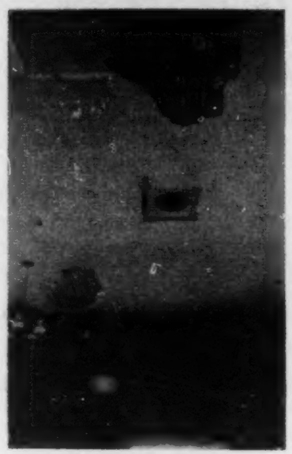
Veranda

Surrounding the entire building is a wood shingled veranda supported by wood posts. The veranda roof meets the adobe wall about two feet below the bearing plate of the main roof. There is no flashing at this junction, thus causing a condition of wall surface erosion below the veranda roof at the east and west ends of the building. The overhanging eaves on the north and south sides protect the unflashed veranda roof-to-wall connection.

The framing of the veranda consists of 4 x 4 posts spaced approximately 8'-9' on centers supporting 4 x 4 beams, which carry 3 x 4 rafters at about 24 inches on centers. Atop the rafters are sheathing boards, one inch thick by 12 to 16 inches wide, which are spaced about two inches apart. The cedar shingles are visible through the spaces. The underside of the veranda roof is finished with flaking whitewash and many of the boards are water stained.

Left: CHIMNEYS were reconstructed, in the attic, with new bricks in 1972. The west chimney is shown.

Right: SQUARE OPENING indicates the original location of the west chimney. The round hole marks the location of the reconstructed chimney in the attic.



GADA Photos - 1981

The WEST CHIMNEY bears on the attic floor, which was once covered with twelve inches of earth insulation.

The 4 x 4 posts are encased with 1 x 6 boards to about two feet below the beam. The white-painted casings are, in turn, encased with green-painted, two-foot high concrete pedestals. The posts rest on a continuous concrete curb, which remains from a now-removed concrete floor. The existing veranda floor is sand.

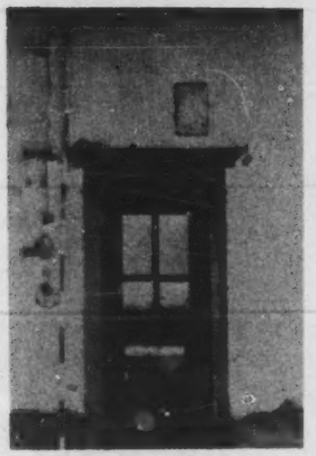
Chimneys

No parts of the three original brick chimneys remain. In 1972 the attic portions of the chimneys were reconstructed with new bricks. Many of the original chimney bricks are stored on the site. A square hole in the ceiling of Room 1 and a corresponding patched hole in the roof indicate the location of an original chimney. This particular chimney was reconstructed four feet west of its original position.

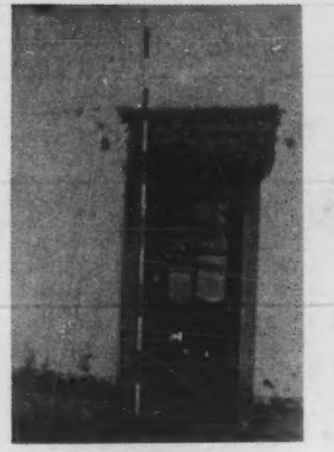
Doors

The existing east, west, and south doors each have a four-light window above two side-by-side wood panels with decorative molding. No door has a full set of four unbroken lights. The bottoms of the doors had been undercut to clear the added layer of flooring installed in 1904. The north door is missing, and the opening is secured with a four-panel door nailed upside-down to the interior side of the door frame.

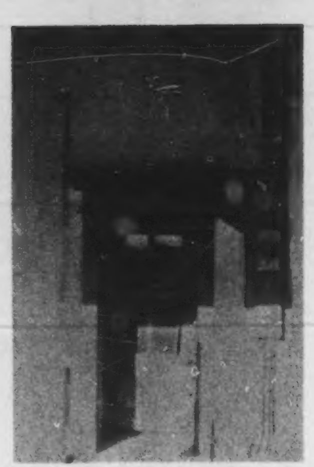
Decorative cornices, removed from above the north and south doorways, are stored inside the building. The east and west doorways retain their cornices. The cornices, casements and doors are painted dark green.



WEST EXTERIOR DOOR. (Door 1)



SOUTH EXTERIOR DOOR. (Door 2)
Note wood lintel.



EAST EXTERIOR DOOR. (Door 3)
Note electric service installed in 1972.

CORNICE of Door 2.

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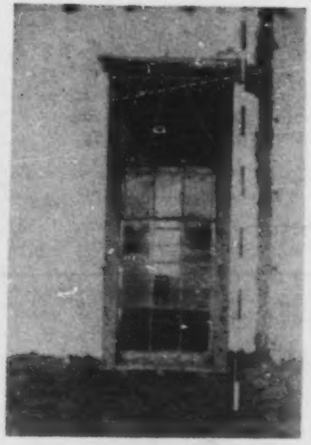
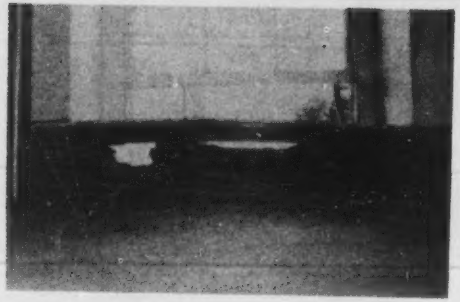
GADA Photos - 1981

WINDOW 2.

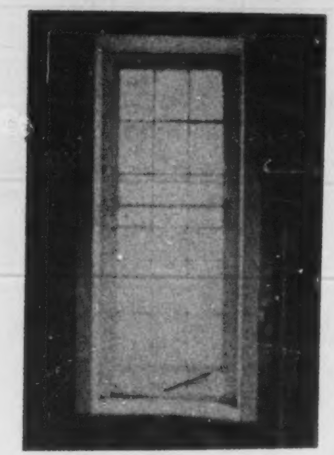
WINDOW 6.

WINDOW 7.





WINDOW 8. The adobe wall has deteriorated under the sill.



WINDOW 8. Full interior view

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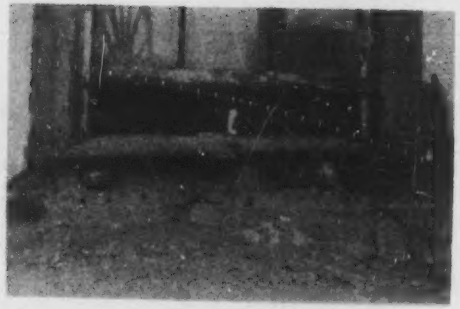


WINDOW 8. Exterior sill bowed upwardly at center. Note bottom rail has been cut to conform to bow.

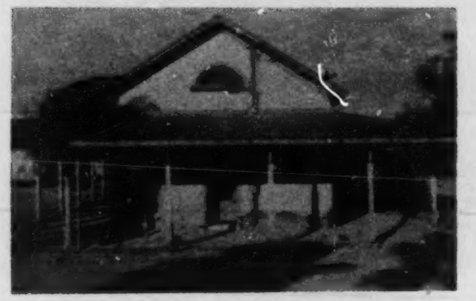
Windows

Throughout the building 3'-10" x 9'-4" windows, consisting of rope-hung, double-hung sashes with 9/9 lights, are typical. All are set at the outside face of the wall to form a window ledge 1'-5" deep, one foot above the floor. The windows, as two of the exterior doors, have had their cornices removed and stored. Although there is no evidence of window shutters, six hinges (actually only half hinges), which once supported exterior shutters, remain on each casement.

An unusual condition relating to the exterior walls is apparent at the windows. The wood window sills are bowed upwardly one to two inches at their centers, causing some damage to the sashes and glass. This condition was also recorded in 1972 and has probably existed for many years. Early repair of the window woodwork is in evidence. Shaped wood pieces, flat on the bottom and curved on the top have been set between the straight baseboard and the bowed sills. Also, the bottom rails of the lower sashes have been cut to conform to the bow of the sills.

Ventilators

Each of the gable ends of the building has a 3-foot radius, semi-circular ventilator, which serves to allow the free movement of air through the attic. The openings are fitted with green painted, fixed, wood louvers, which are in poor repair.



EAST ELEVATION. Note electric service entrance.

EAVE of the main roof and top of veranda roof at northwest corner.

VENTILATOR at the west gable.

GADA Photos - 1981

Roof

The outer gabled roof is conventionally framed with trussed rafters, which bear on a wood plate set on top of the adobe wall. The outward thrust of the rafter ends is restrained by a wood tie, which connects the plates set on top of opposite walls. The existing shingles were installed in 1974.

The inner, flat roof consists of wood joists spanning from outer wall to outer wall. The ends of the joists are set into the adobe. Wood sheathing, nailed on top of the joists, supported a 12-inch thick layer of earth insulation, which was removed in 1972 to relieve the load on the roof.

The wood members of the double roof system are in reasonably sound condition, but many connections are of questionable structural value. Most members appear to be original, but some were installed (as replacements) in 1972. Evidence of termite activity, now arrested, is present.

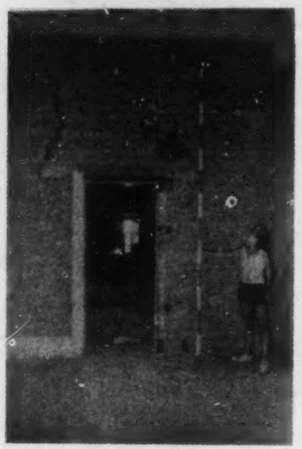
DESCRIPTION OF INTERIOR OF BUILDING ELEMENTS

General

The floor plan of the Office of the Depot Quartermaster is a simple, linear arrangement of three rooms of dissimilar sizes. The three rooms are connected by two doorways located on the centerline of the building's long axis.

ROOM 2 CEILING. Lighting fixtures were installed in 1972.

ROOM 3 CEILING.



GADA Photos - 1981

WEST WALL OF ROOM 3. Wall crack and steel beam pocket are visible above the door.

Flooring

In 1974 the original wood floor system was removed and replaced with a concrete slab. The concrete extends into the door openings. The slab was placed on an aggregate base course installed over compacted earth fill. The finish floor elevation of Room 2 is 2-3/4 inches lower than that of the adjacent rooms. This depression was designed to accommodate a tongue and groove floor set on wood sleepers; the floors of Rooms 1 and 3 were designed for linoleum.

Interior Walls and Wall Finishes

The removal of the interior wall plaster in 1972 revealed, with a few exceptions, the remarkably good condition of the adobe walls. A large jagged crack occurs in the wall at the south end of the lintel of Door 6 and extends to the ceiling directly above. Some patching of cracked and eroded adobe exists in the north wall of Room 2, where kitchen plumbing was once located. Another crack occurs at the west end of the lintel of Door 4. The adobe below Windows 7 and 8 is heavily eroded. Other damage occurs in the east and west walls of Room 3, where a steel beam had been installed to support a lowered ceiling. The non-original beam and ceiling were removed in 1972.

Ceilings

The ceilings consist of half-inch thick lime plaster applied over wood lath nailed to the bottoms of the joists of the inner roof. The ceiling plaster in each of the rooms has been damaged to different extents. The removal of frame partitions in 1972 caused extensive damage to the ceilings in Rooms 1 and 2. At various locations the ceiling lath is missing.

ROOM 1. View toward northwest.

ROOM 2. View toward east.

GADA Photos - 1981

ROOM 3. View toward northeast.

Doors

The two interior, four panel doors measure 3'-2" by 7'-6". Door 6 has been removed from its opening and is stored in Room 1. The doors have plain, 1 x 6-inch board casements and are painted white.

Windows

Many window lights throughout the building are broken, and several window sashes are stuck closed. All interior windows sills, to some degree, are bowed downwardly at the jambs, and all windows have worn, broken or bent members. The windows have plain, 1 x 6-inch board casements and are painted white.

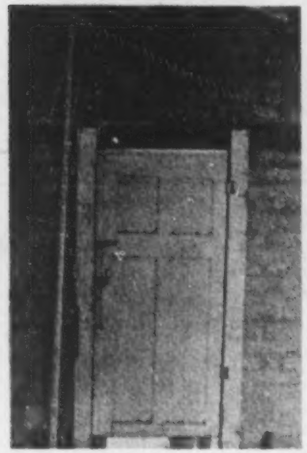
Hardware

Mortise-type door locks are present on all doors. Many have lock plates and knobs with stamped floral designs; strike plates and hinges are plain. The style of the hardware throughout the building is inconsistent.

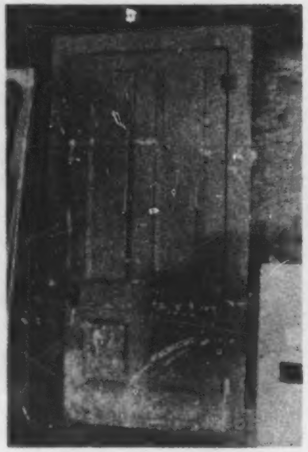
Baseboards

The baseboards consist of 1 x 8-1/2-inch plain boards with 2-inch top moldings. The molding is secured to the baseboard with square nails, and the boards are nailed, in turn, to wood nailer blocks set into the adobe walls. Some segments of the baseboard are missing or damaged due to the addition of frame partitions and kitchen cabinets.

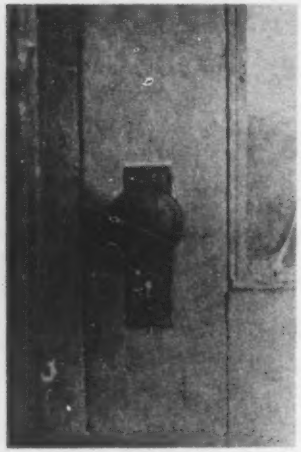
DOOR 4, showing a salvaged door nailed upsidedown to the interior frame.



DOOR 5, west face.



DOORKNOB AND LOCKPLATE on exterior of Door 2.

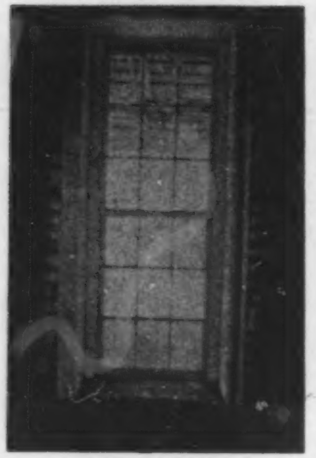


GADA Photos - 1981

Mechanical and Electrical Systems

The building contains no heating or cooling systems. Water and sewer systems to the building were disconnected when the kitchen and bathroom were removed. In 1972 an electrical service entrance was installed, but not connected, on the east end of the building; it is surface mounted and has surface mounted conduits and a meter socket. Electrical chandeliers were also installed in 1972. Electrical floor receptacles were installed in 1974 when the concrete slab was placed.

WINDOW 6, interior view.



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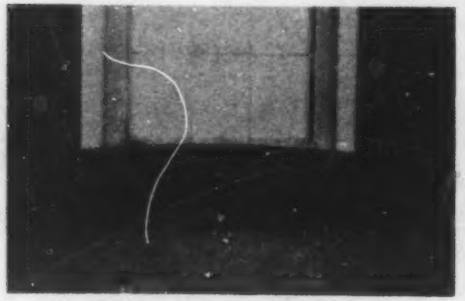
80

WINDOW 6, detail of bowed sill and baseboard.



DESCRIPTION OF THE SITE

The Yuma Crossing proper (the site of the Jaeger ferry crossing) is located directly under the new Interstate Highway Bridge, which is supported on high piers. The Quartermaster Depot is approximately a quarter of a mile downstream from the bridge, which is within the National Register boundary of the Yuma Crossing and Associated Sites. The historic scene has been sullied by this bridge, a nearby railroad bridge, power lines, an older highway bridge, and other modern developments on both sides of the river. Although these features are visually intrusive, they forcefully illustrate the historic role played by the Yuma Crossing from pre-Columbian to modern times and may, in fact, reinforce the significance of the Crossing as one of the principal gateways to the West Coast.

The integrity of the site, or at least its historic character, has been affected more by the upstream Colorado River dams than by the intrusions. The flow of the river has been reduced to such a degree that the river has little influence on the Depot site today, and it is difficult to imagine steamboats operating in the present stream.

OFFICER'S QUARTERS AND KITCHEN. View toward the northeast. The buildings are owned by the City of Yuma and comprise the Custom House Museum.

RESERVOIR. View toward east. This stone water tank was acquired by Arizona State Parks in 1981.

GADA Photos - 1981

CORRAL HOUSE. View toward northeast. The building, now vacant, is owned by the Yuma Water Users' Association.

STORE HOUSE. View toward northeast. The building is used as a maintenance shop by the Yuma Water Users' Association.

The State of Arizona (acting through the State Parks Board) presently owns a little less than an acre of the original Depot site, upon which the Office of the Depot Quartermaster is located. The site slopes downwardly about two feet from the northeast corner to the southwest corner. A six-foot high chainlink security fence surrounds the property. The present river bank, north of the property, is some distance from its natural (original) location.

East of the Office is the Custom House Museum. The Museum is well-maintained; landscaped with trees, lawn and flowers; has a small parking area to the south and is surrounded by a chainlink fence.

West of the Office is the Depot Storehouse, now modified as the Water Users' Association maintenance shop. The building is surrounded by stockpiles of material.

North of the Office and within the park boundary stands the Depot's original Water Reservoir, its concrete retaining walls damaged by erosion of the river bank below.

The entrance driveway into the park crosses the Water Users' Association property, which is secured after working hours.

The Office site has little landscaping. There are two palo verde trees near the south veranda, a palm to the southeast and an ironwood to the northwest of the building, and a few scattered native plants. Several eucalyptus trees grow near the Water Reservoir. The ground surface north of the building is natural earth, and to the south, asphalt.

An "old" wood (telegraph?) pole, with clear glass insulators, stands north of the building, and in the south yard there is a steel pipe flagpole. Large, historic artifacts, i.e., wagons and machinery of undetermined provenience, are stored (by State Parks) in and around the building.

The site, not presently served by utilities, formerly had electric, water and sewer services. These services are present at the adjacent properties.

4 DATA INTEGRATION AND CONCLUSIONS

GENERAL

By synthesizing the documentary, architectural, and archaeological data obtained during the course of this study, it is possible, with a few exceptions, to make conclusions which establish the conditions of the Office of the Depot Quartermaster at almost any date of its long life.

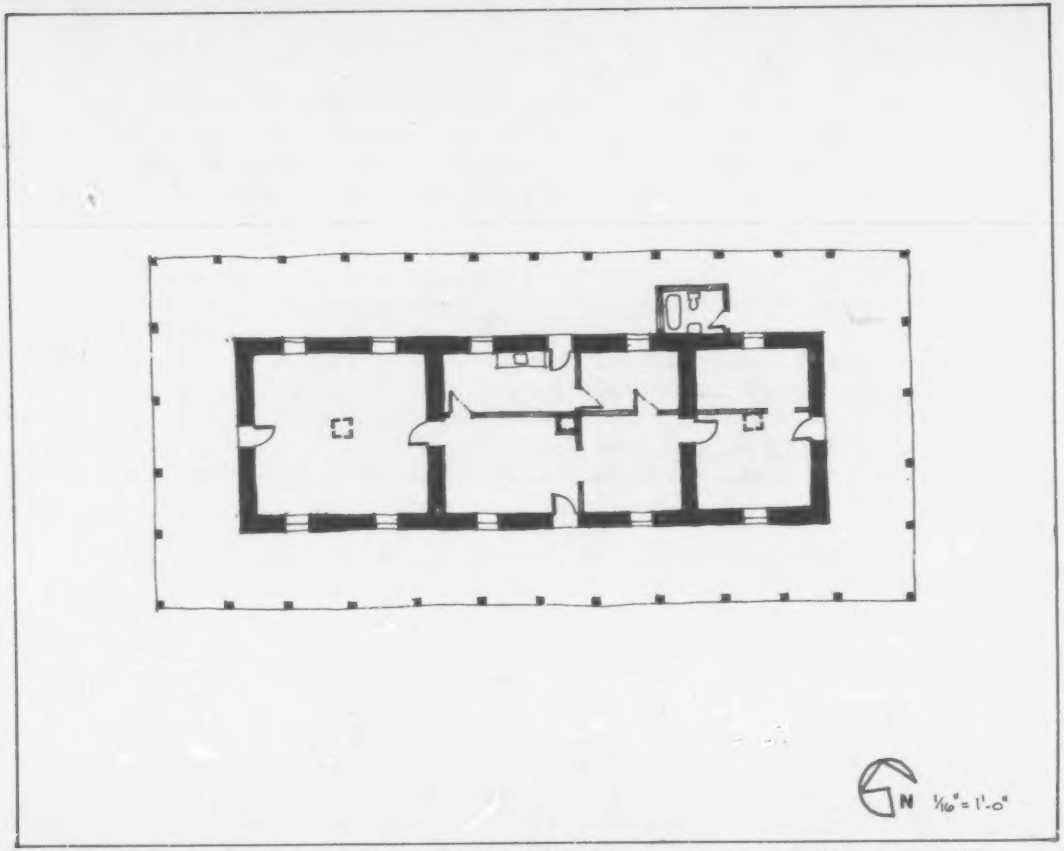
From the list of materials requisitioned for the construction of the "proposed addition to the quartermaster office", a sketch of the proposed addition, and the written description of the building (all contained in a letter dated August 7, 1871, from J.D.C. Lee, Depot Quartermaster, to Lt. Col. C. H. Tompkins, seeking authorization to construct the building), it is apparent that the existing building is virtually in its original form. No documentary evidence has been found to indicate that significant changes were made to the Office during the military period from 1872 to 1883.

The first documented change occurred in 1884, when the Signal Corps requested the installation of "linoleum for floor covering"[1] and a "fence placed 12 to 15 feet from the porch"[2]. In 1889 general repairs, including cleaning, painting and plaster patching, were made, as evidenced by the contractor's vouchers[3].

[1] 24 Jun 1884
To: The Executive Officer
Signal Service,
USA. Washington,
D.C.
From: W.L. Delmo
Yuma, A.T.

[2] To: The Executive
Officer Signal
Service, USA.
Washington, D.C.
From: Unknown

[3] 12 Sep 1889
Office repairs
A.F. Whitficid



86

FLOOR PLAN of the OFFICE OF THE DEPOT QUARTERMASTER, 1969, showing partitions and chimneys removed by Caperton in 1972.

The first significant changes to the building were documented in 1904. This work included reflooring the entire building, plastering and painting the exterior walls, repairing and encasing the porch posts, installing a concrete veranda floor, whitewashing the ceilings, shingling the roof, repainting the gables, painting and calcimining the interior walls and ceilings, and repairing the doors and windows. Also, sometime before 1904 (and after 1889), partitions had been installed in Rooms 2 and 3 to create living spaces. A bathroom was also added on the north veranda, probably after 1904. All of the changes recorded in the 1904 documents, the pre-1904 partitions and the post-1904 bathroom were in evidence when the building was acquired by the State of Arizona in 1969.

In 1972 the State Parks Board initiated preservation actions which included the removal of the frame partitions, the bathroom, the concrete veranda floor, the upper part of the post casings, the eave soffit, the 1904 tongue and groove flooring, the original earth insulation from the inner roof, and the three original brick chimneys. (The portions of the chimneys above the roof had been removed when corrugated metal roofing was installed at some unknown time prior to 1969.) New electric service and lighting fixtures were also installed in 1972. In 1974 preservation work was continued. The metal roofing and underlying shingles were replaced with new cedar shingles, the roof framing was repaired, and the deteriorated wood floor system within the building was replaced with a concrete slab floor.

Although many of the changes made to the Office of the Depot Quartermaster are clearly documented and the major elements of the original building are well defined in the 1871 requisition, many of the building's original details had not, until the time of this study, been determined nor investigated. In their efforts to establish the character of the building between the years 1872 and 1883, the authors supplemented the documentary data with architectural and archaeological investigations and, with some deductive reasoning, have been able to answer many of the questions concerning the early construction. Some of the answers are of a conjectural nature and it is hoped that additional data concerning several of the building's original features will be discovered.

The principal building elements are hereafter discussed.

EXTERIOR BUILDING ELEMENTS

Foundations

Archaeological test excavations revealed that the original foundations are intact. The adobe brick wall was constructed in a trench without a spread footing or any other special feature, i.e., a stone bottom course. Backfill of the trench was found to contain construction debris, especially many well-preserved adobe brick fragments and a few square nails. Several existing conditions, such as wall cracks, bowed window sills and wavering masonry bed joints, indicate that foundation settlement has occurred over the years, perhaps as the result of river flooding (before the construction of the river dams). The adobe foundation walls are in remarkably good condition. No documentary data pertaining to the foundations has been found.

Exterior Wall Finish

The 1871 requisition describes the "building to be of plain adobe walls and an 1875 photograph appears to show unplastered ("plain adobe") walls. A requisition dated March 16, 1904, ordered "plastering of the walls outside". Caperton's 1973 report describes the removal of a one-inch thick "concrete skirt and wood baseboard" from around the base of the exterior walls. The lime plaster now present on the walls (above the removed "concrete skirt") is bonded to the adobe with round nails and was undoubtedly installed under the 1904 requisition.

Veranda

The original veranda roof structure was probably intact in 1974. At that time broken members were replaced with members replicating the original work.

The original framing consisted of spaced sheathing boards, rafters, rafter-supporting perimeter beams, and plain wood posts. In 1904 the posts were encased with boards and a soffit was added to the eaves. The 1871 requisition lists the lumber required for the veranda, and no mention is made of boards for the post casings or soffit. The 1875 photograph shows the posts and eave fascia painted in a light color, which field investigation determined to be white (under existing green). The soffit was removed by Caperton in 1972; the post encasement boards exist today.

The determination of the original construction of the veranda floor has been a perplexing task. Because documentary data regarding the floor has been inconclusive, it has been necessary to rely on the architectural interpretation of the archaeological features to determine the nature of the original floor. In 1972 a concrete floor, which historic documents indicate was installed in 1904, was removed by Caperton. He reported finding remnants of a herringbone-pattern brick floor set on a sand bed under the concrete slab. Recent test exacavations in the floor revealed several whole bricks *in situ* at the same elevation reported by Caperton. The original material requisition included 10,000 bricks, a quantity too small for the chimneys *and* the veranda floor, and too large for *either* the chimneys or the floor alone. Furthermore, the chimney bricks and the floor bricks are different in size and quality, thus suggesting that they were not acquired at the same time, i.e., they were not both original materials.

The use of brick floors in military construction in Arizona Territory is unknown to the authors. Many military structures of the era had wood plank or earth veranda floors. Test excavations at the Office revealed no evidence of either wood or hard-packed earth.

A document dated August 21, 1886, related the presence of a "board walk" connecting the Storehouse and the Office. Although no reference is made to the Office proper, the use of board walks at the Depot is established. The authors are of the opinion that the original veranda floor was wood and that sometime prior to 1904, when the concrete floor was installed, the wood floor had deteriorated and was replaced with brick. It is hoped that additional information on the veranda floor will be found before restoration of this feature is undertaken.

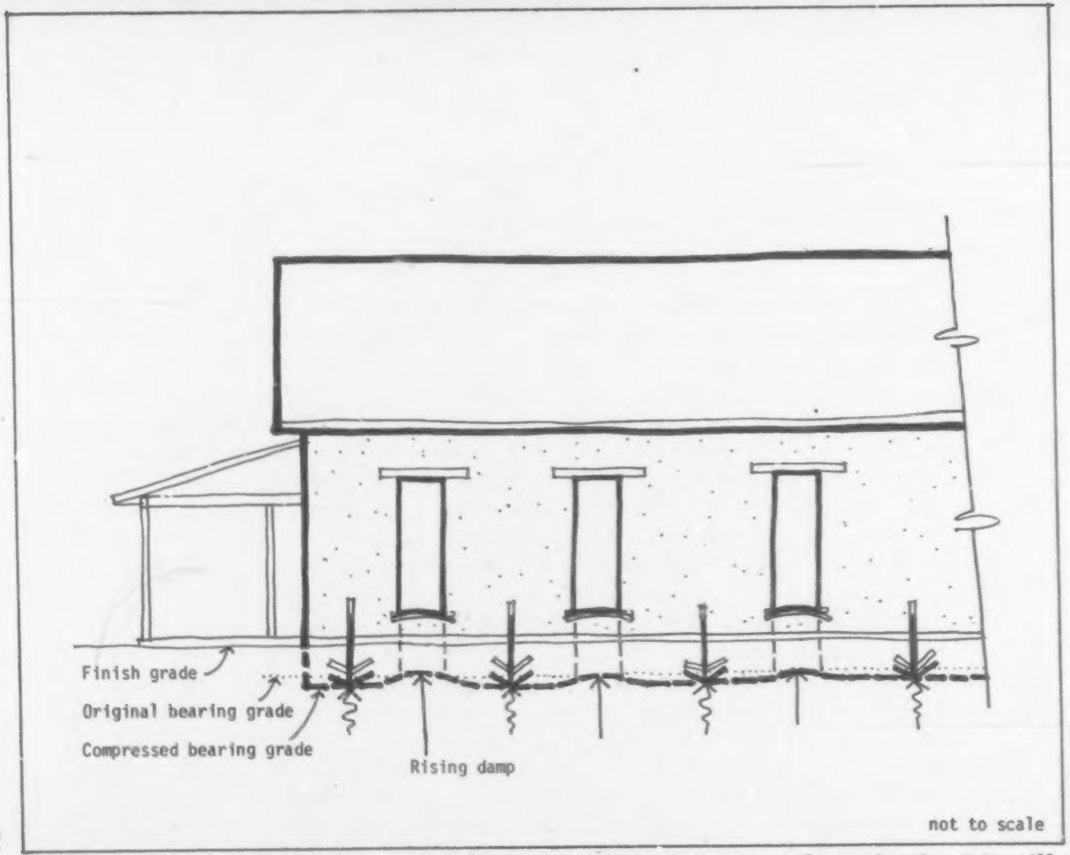
Chimneys

Documentary data provides evidence that a brick chimney was located near the center of each room in 1872. Chimneys constructed with lime mortar near the center of each room were removed by Caperton. The chimneys were without fireplaces and had stove-pipe openings about eight feet above the floor. The chimneys passed through the ceiling and into the attic, where their plan dimension was reduced before they penetrated the roof. They extended about four feet above the roof ridge and had corbelled caps similar to those existing on the Corral House. At some time between 1904 and 1969, the above-the-roof portions of the chimneys were removed, probably when the shingles were covered with corrugated sheet metal roofing. The existing in-the-attic sections of the chimneys were reconstructed with modern brick in 1972. The west chimney is not in the original location.

Windows

Since the acquisition of the building by State Parks, three matters concerning the windows have received considerable discussion and speculation. The first, the upward bowing of the window sills, has been thought by some observers to have been an intended design feature which allowed water to drain from the sills. This suggestion is not valid -- the wide veranda affords ample protection to the windows from rain. Also, the sills at the historic Fort Yuma buildings are virtually the same as those in the Office, and the Fort Yuma sills were constructed level. Further, the joinery of the casement and sill members at the Office shows no evidence that the sills were constructed with an upward bow. The condition of the bowed sills is a symptom of foundation settlement and not an intentional detail. Field study of the sill condition reveals that either the bearing wall sections adjacent to the windows have settled (from the roof load) more than the sections under the windows, or that the sections under the windows have swelled, probably from rising damp. Both actions may have occurred and either would have caused the upward bow.

372


Finish grade
Original bearing grade
Compressed bearing grade
Rising damp
not to scale

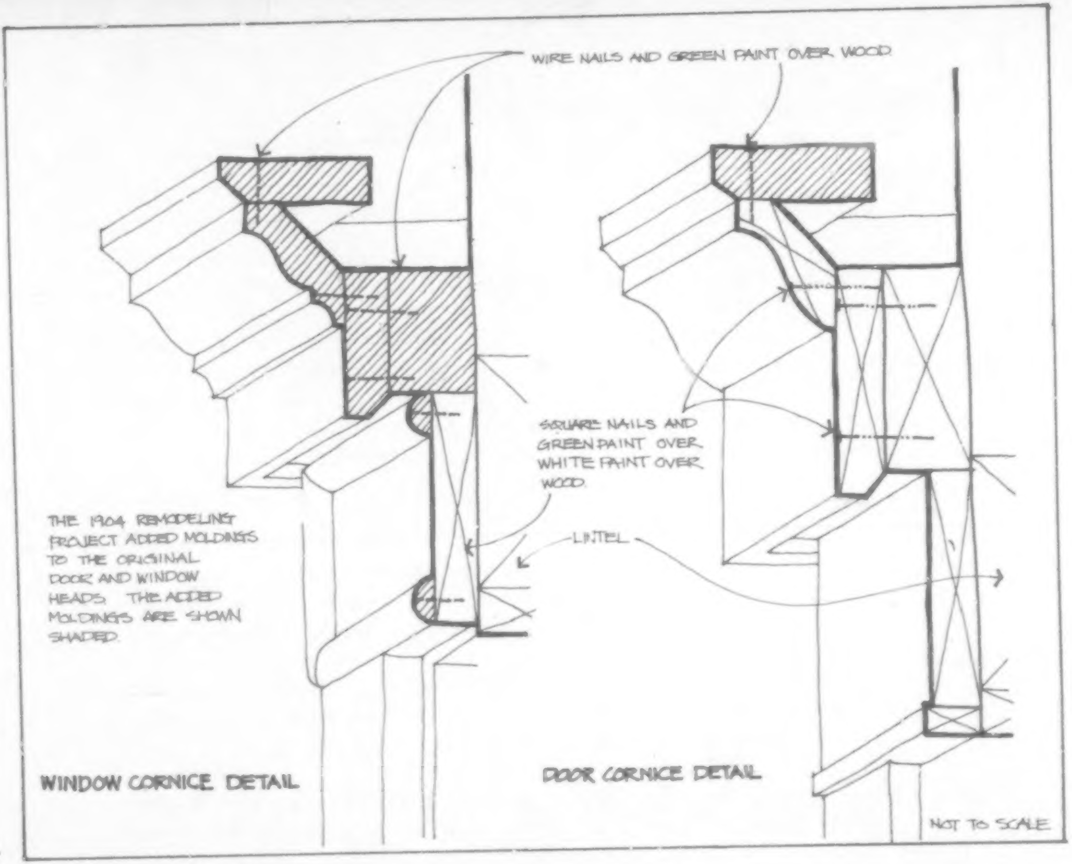
92

LOADING DIAGRAM illustrating how the adobe walls have compressed the bearing soil, causing the window sills to bend down at the jambs.

The second matter concerning the windows involves the design of the exterior casements. When the building was acquired by State Parks, the exterior doors and windows had wood cornice elements at their heads. In 1972 all window and door cornices, except the east and west door cornices, were removed and stored in the building. A positive determination of the date(s) of construction of the cornices cannot be derived from historic documents now available. However, the relative ages of the elements are evidenced by the types of nails used (square or round) and the paint color chronology (green on white or green only). Square nails were used in 1871 for the construction of the building and can be found in the lower pieces of the door cornices. The upper pieces of the door cornices and the entire cornices of the windows were constructed with round nails. Thus it is conjectured that at some unknown date the window cornices were added and the door cornices enlarged. The window cornices were made with three pieces of milled lumber and the door cornices were embellished with a single, added molding so as to make them similar to the window cornices. Also, probably at the same time as the cornice work, decoration was applied to the head members of the window casements. The decoration consists of a half-round molding applied in a rectangle to form a relief panel on the head member.

The paint color chronology of the window and door elements verifies the relative ages of the elements as indicated by nail types. The original square-nailed portion of the door cornices has a first coat of white paint and a second coat of green paint.

The door and window casements also have green-on-white paint. The window cornices and top moldings of the door cornices, which are fastened with round nails, have green paint only applied directly to the wood.


WIRE NAILS AND GREEN PAINT OVER WOOD
THE 1904 REMODELING PROJECT ADDED MOLDINGS TO THE ORIGINAL DOOR AND WINDOW HEADS. THE ADDED MOLDINGS ARE SHOWN SHADED.
SQUARE NAILS AND GREEN PAINT OVER WHITE PAINT OVER WOOD.
LINTEL
WINDOW CORNICE DETAIL
DOOR CORNICE DETAIL
NOT TO SCALE

94

COMPARATIVE CORNICE DETAILS.

The third matter regarding the windows is the dating of window shutters. The presence of shutter hardware (the fixed half of shutter hinges) on the window casements establishes the fact that shutters occurred at one time. Identical hardware exists on the Fort Yuma buildings. An 1875 photograph clearly shows open shutters on the east windows of the Storehouse and may also show, within the shadows of the veranda, closed, dark-colored shutters on the south windows of the Office. The quality of the photograph makes positive identification of shutters impossible.

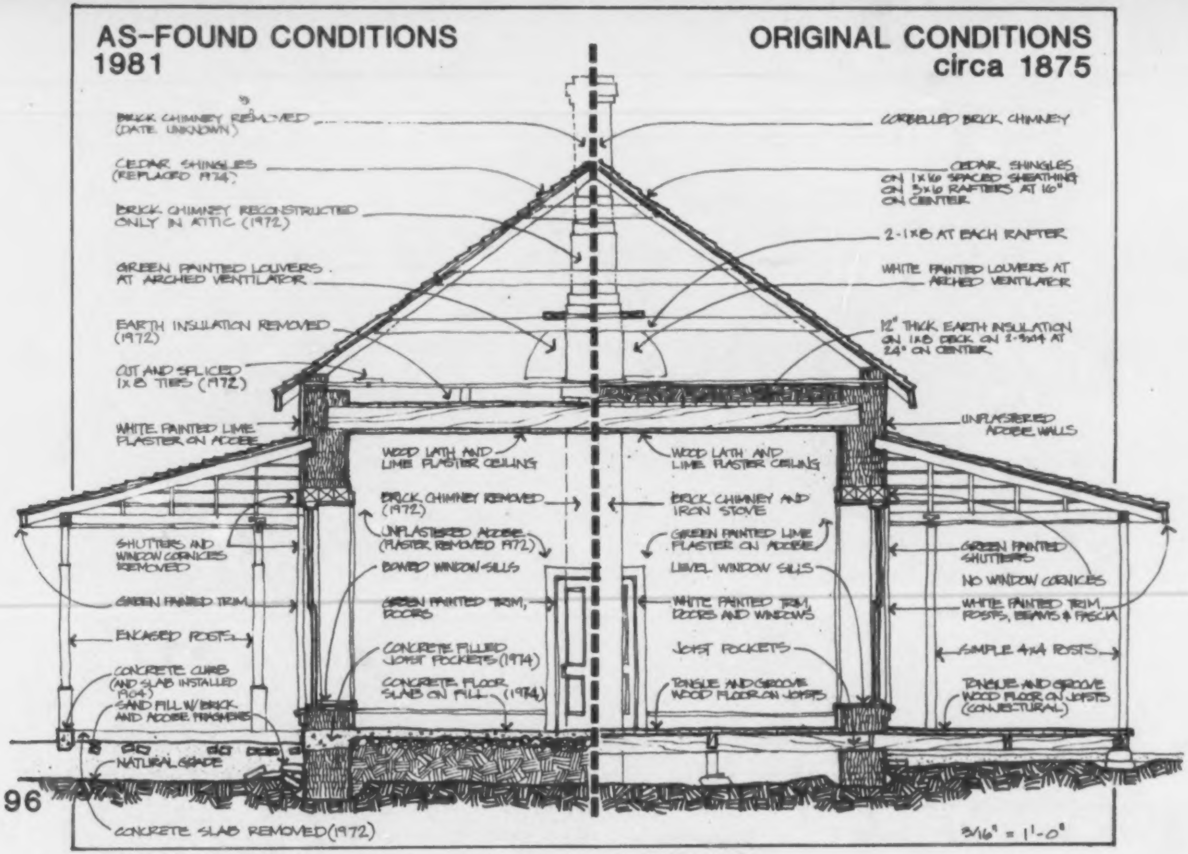
The August 22, 1889, cost estimate for painting includes green shutters that "are not in much need of paint but it would improve the looks". This statement establishes the presence of shutters in 1889 and infers that they had been in place for some time. It was the custom of the day to paint shutters in a color which contrasted with the color of the casement (white casements with green shutters).

The use of shutters in early military buildings in Arizona was common, and considering the efforts made by the Army to provide relief from the heat of Yuma, it is reasonable to assume that shutters were an early, if not original, feature of the Office of the Depot Quartermaster. However, it should be noted that doors and windows are listed in the original material requisition, and shutters are not.

Much of the existing window glass shows the typical imperfections of 19th Century glass and is probably original.

Doors

The 1875 photograph shows a white-painted south door and casement. This color is consistent with the paint color chronology (green over white). The existing doors have


AS-FOUND CONDITIONS
1981
ORIGINAL CONDITIONS
circa 1875
BRICK CHIMNEY REMOVED (DATE UNKNOWN)
CORBELLED BRICK CHIMNEY
CEDAR SHINGLES (REPLACED 1974)
CEDAR SHINGLES ON 1x6 SPACED SHEATHING ON 3x6 RAFTERS AT 16" ON CENTER
BRICK CHIMNEY RECONSTRUCTED ONLY IN ATTIC (1972)
2-1x8 AT EACH RAFTER
GREEN PAINTED LOUVERS AT ARCHED VENTILATOR
WHITE PAINTED LOUVERS AT ARCHED VENTILATOR
EARTH INSULATION REMOVED (1972)
12" THICK EARTH INSULATION ON 1x8 DECK ON 2-3x14 AT 24" ON CENTER
CUT AND SPLICED 1x8 TIES (1972)
WHITE PAINTED LIME PLASTER ON ADOBE
UNPLASTERED ADOBE WALLS
WOOD LATH AND LIME PLASTER CEILING
WOOD LATH AND LIME PLASTER CEILING
BRICK CHIMNEY REMOVED (1972)
BRICK CHIMNEY AND IRON STOVE
UNPLASTERED ADOBE (PLASTER REMOVED 1972)
GREEN PAINTED LIME PLASTER ON ADOBE
SHUTTERS AND WINDOW CORNICES REMOVED
GREEN PAINTED SHUTTERS
BOWED WINDOW SILLS
LEVEL WINDOW SILLS
NO WINDOW CORNICES
GREEN PAINTED TRIM
GREEN PAINTED TRIM, DOORS
WHITE PAINTED TRIM, DOORS AND WINDOWS
WHITE PAINTED TRIM, POSTS, BEAMS & FASCIA
ENCASED POSTS
CONCRETE FILLED JOIST POCKETS (1974)
JOIST POCKETS
SIMPLE 4x4 POSTS
CONCRETE CURB (AND SLAB INSTALLED 1904)
CONCRETE FLOOR SLAB ON FILL (1974)
TONGUE AND GROOVE WOOD FLOOR ON JOISTS
TONGUE AND GROOVE WOOD FLOOR ON JOISTS (CONJECTURAL)
SAND FILL W/ BRICK AND ADOBE FRAGMENTS
NATURAL GRADE
CONCRETE SLAB REMOVED (1972)
3/16" = 1'-0"

COMPARATIVE CROSS-SECTION through the OFFICE OF THE DEPOT QUARTERMASTER.

two panels in the lower half and four glass lights (window panes) in the upper half. In the 1875 photograph the lower panels are clearly seen, the upper half of the door is in shadow and the presence of the lights cannot be determined. The doors in the Corral House have glass lights and closely match those in the Office. The existing doors, it appears, are original.

Gable Ventilators

The 1875 photograph suggests the presence of light-colored, louvered ventilators in the gables. Examination of the existing ventilators revealed only dark green paint. This may suggest that the original ventilators deteriorated from exposure to the weather and that it was necessary to replace them in 1904 when the trim was painted green. The masonry openings in which the ventilators are installed are formed with true arches which are visible from the inside of the attic. The presence of the ventilators in the original construction is a certainty; their original color has not been determined.

Roof

The original material requisition described a "double roof, one of shingles and one of dirt with a draft between, and plenty of openings and protected by a veranda all around". In 1972 the earth ("dirt") roof was removed to relieve the stress on the joists. The 1974 restoration work included the removal of a corrugated sheet metal roof, which had been applied over wood shingles, and the installation of new fire-resistant, cedar shingles.

The accompanying Historic American Buildings Survey drawings illustrate the 1981 existing conditions of the building and summarize various documented actions which have occurred since 1884.

INTERIOR BUILDING ELEMENTS

Flooring

The deteriorated floor structure removed in 1974 corresponded to the floor construction documented in the 1871 requisition. In 1871 2600 linear feet of tongue-and-groove flooring (3/4 x 3-1/2-inch) was ordered. The flooring was laid directly on and perpendicular to 2-1/2 x 9-1/2-inch joists which were pocketed into the walls at about two foot intervals. The joists ran north-south in Rooms 1 and 2 and east-west in Room 3, and provided an airspace of about 18 inches between the flooring and the earth grade.

In 1884 the Signal Corps requested "linoleum for floor covering", and in 1904, as documented by a dated estimate, a new floor was requested.

In 1972 a tongue-and-groove floor was removed, revealing another tongue-and-groove floor. On top of the lower floor, Caperton reported finding remnants of brown linoleum. He also reported that the upper floor was laid perpendicularly to the lower floor. The "as-found" evidence verifies the historic documents and establishes the fact that during the period of military use the Office floor was bare tongue-and-groove boards.

Wall Finishes

The earliest documentation of interior wall plaster is found in an 1889 letter which requested the plastering of cracks between window frames and the walls. It is unclear whether the walls in 1889 were exposed adobe in need of plastering, or whether they were covered with plaster and in disrepair. Historic photographs of the Office interior have not been found.

Recent architectural investigation discovered a few small remnants of wall plaster that had survived the general removal of plaster in 1972. These fragments of half-inch thick lime plaster, reinforced with hair, exhibited a single coat of "institutional green" paint. The composition of the wall plaster matches that of the ceiling plaster and the two could be contemporaneous. See "Ceilings" below.

The fact that the now-exposed adobe walls show no damage, e.g., scratched graffiti or marks of chairbacks and desktops, leads to the conclusion that the interior walls and ceilings were plastered simultaneously at the time of construction. Furthermore, the millwork used for casements and baseboards is of a type typically used with plastered walls.

Ceilings

Five thousand wood laths were requisitioned in 1871 for the construction of the ceilings. Architectural investigation has verified that the existing ceilings are constructed with lime plaster on wood lath and that the laths are fastened with square nails. The ceilings are finished with yellow ochre paint over whitewash. It appears that the ceilings are original and that the earliest coating was whitewash. The existing ceiling scuttles have been cut into the ceiling and were probably installed in 1972.

Doors

The 1871 material requisition lists four doors, 3-1/2" x 7'-6", and twelve windows. The door dimensions match those of the existing exterior and interior doors. These quantities suggest that the building plan was changed after the requisition was placed. Each elevation contains an original door, thus utilizing the four doors requisitioned. The building has, however, only 10 windows, thus suggesting that the building was originally planned with a window in the east and west elevations and that doors were installed in place of these windows. The two interior doors are dissimilar to the exterior doors, thus indicating that they are not original items. It seems probable that the interior door openings were originally constructed with casements only, and that they were later fitted with doors.

Windows

The bowed window sill condition previously discussed is also apparent on the interior of the building. The interior sills were originally constructed with level boards. According to the 1889 cost estimate, the interior sashes and casements were painted white at that time.

Baseboards

The existing baseboards date from the original construction, as evidenced by the presence of square nails fastening them into wood blocks laid-up with the adobe. The baseboards, as the interior doors and windows, are painted white.

Mechanical and Electrical Systems

The 1875 photograph shows a telegraph pole located at the south veranda near the center of the building. A similar pole now exists on the north side of the building. The original alignment of the telegraph line is not known. A letter dated January 16, 1908, contains the first known reference to an electrical system - "to wire and fit this building with lights and fans...would cost $197.65"[4].

A water supply system was in operation at the Depot by 1871. A photograph dated 1869 shows the Water Reservoir, and a plat of the Depot from 1871 shows building locations and water supply lines. In a letter dated July 11, 1885, a soldier complained that water, "when...taken from the pipe...is too hot for one to bear his hand in it"[5]. It has not been determined when the existing hose bibbs at the veranda were installed, but they appear to date from fairly recent years. A bathroom and kitchen were removed from the building in 1972. Both were probably installed after 1904.

[4] 16 Jan 1908
To: Chief of Weather Bureau, Washington, D.C.
From: S. Hackett, Yuma, A.T.

[5] 11 Jul 1885
To: Chief Signal Officer of Army, Washington, D.C.
From: J.T. Barber Yuma, A.T.

SITE FEATURES

The early historic photographs of the Depot show only a few trees, mainly cottonwoods along the river. The ground surface was natural, barren earth.

Later historic photographs illustrate the introduction of numerous shade trees, often near the buildings. The use of shrubs, ground cover and ornamental plants, except at the Officer's Quarters, was uncommon. A traveler through Arizona City (Yuma) in about 1870 recorded that "General B. Dandy, quartermaster... has everything in fine order; a comfortable residence on the bluff on the Colorado from which he pumps water by steamworks and can throw it all over the large depot for stores, his residence, and gardens. The latter by the way, is worthy of remark, for in them are grown the thrifty peach, orange, lemon, fig, pomegranate, date, and other fruits, and some nut trees; also grapes; likewise all sorts of staple vegetables, melons, etc...."[6]

The landscaping around the Office in the 1875 photograph is very modest. A few low shrubs and two young trees along the south veranda and two larger trees at the east of the building can be seen. A row of regularly spaced young trees (probably cottonwoods) has been planted between the Storehouse and the Office. The barren ground slopes away from the building on the south and west sides. A 1904 photograph shows a new row of young trees between the Storehouse and Office and several mature trees in the fenced yard south of the Office.

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[6] Lockwood, Frank C., Pioneer Days in Arizona: From the Spanish Occupation to Statehood, 1932: pp. 333-334

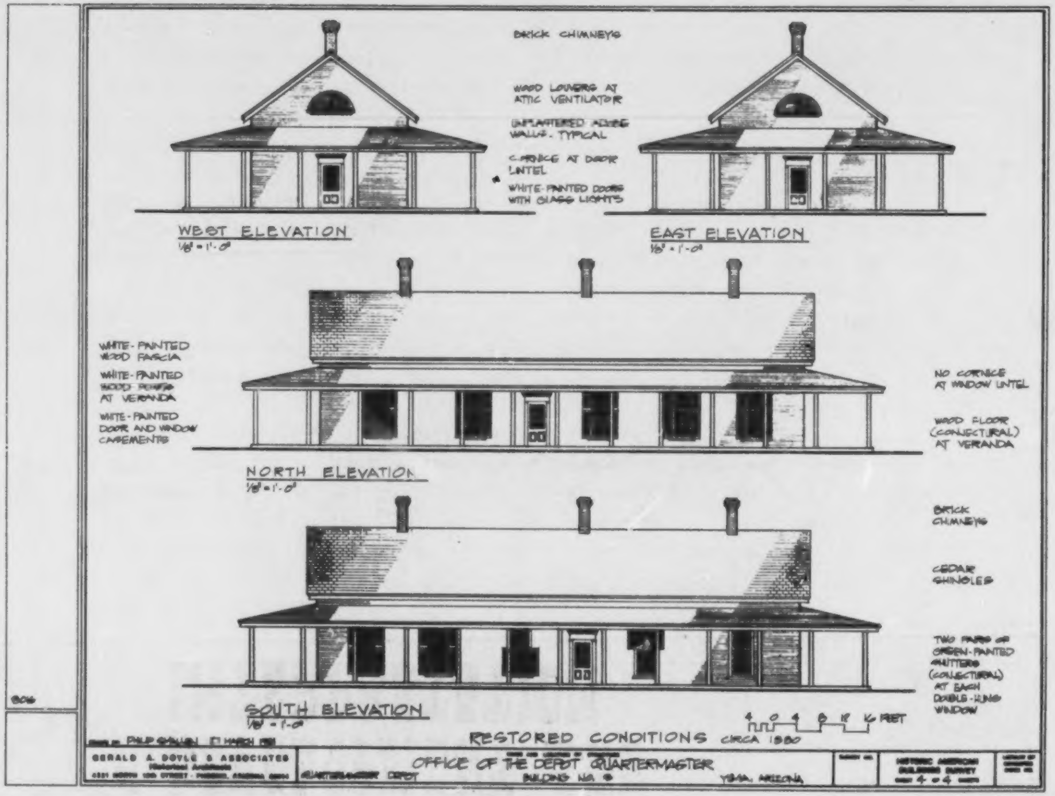
At various times the Office and the Officer's Quarters were surrounded by fences, the alignments of which were little changed over the years. A map of the Depot, circa 1866, and an 1869 photograph show a log stockade on the Depot perimeter. Maps dated 1870 and 1875 indicate a fence around the Officer's Quarters. The 1875 photograph pictures a fence of logs or vertical boards between the Office and the Quarters. Later photographs show a white picket fence around the Quarters.

In 1884 the Signal Corps requested a fence around the Office to protect it against "intrusion by domestic animals"[7]. It is not known if this fence was constructed.

Another feature of the site was a weather instrument shelter, constructed in 1879 on the north side of the Office at an elevation of 5'-3" above the ground. Contained within this shelter were three thermometers, standard, maximum, and minimum; and an anemometer, with self-regulating attachment. A letter dated March 24, 1883, indicates that the shelter had been moved from beneath the veranda at the office window to a "frame standing on the ground ten feet distant from north window of office.... The side of shelter facing building is open no lattice work of any kind on this side..."[8]. In 1886 the Signal Corps moved the weather instrument shelter to the Storehouse roof. Historic photographs indicate that some time before 1904 the weather instrument shelter was relocated to a high frame south of the Office.

[7] 13 Jul 1884
To: Executive Officer
Signal Service,
USA, Washington,
D.C.
From: ?.S. Delano,
Yuma, A.T.

[8] 24 Mar 1883
To: Executive Officer
Signal Service,
USA, Washington
D.D.
From: ?.S. Delano
Yuma, A.T.


BRICK CHIMNEYS
WOOD LOUVERS AT ATTIC VENTILATOR
UNPLASTERED ADOBE WALLS - TYPICAL
CORNICE AT DOOR LINTEL
WHITE-PAINTED DOORS WITH GLASS LIGHTS
WEST ELEVATION
1/8" = 1'-0"
EAST ELEVATION
1/8" = 1'-0"
WHITE-PAINTED WOOD FASCIA
WHITE-PAINTED WOOD POSTS AT VERANDA
WHITE-PAINTED DOOR AND WINDOW CASEMENTS
NO CORNICE AT WINDOW LINTEL
WOOD FLOOR (CONJECTURAL) AT VERANDA
NORTH ELEVATION
1/8" = 1'-0"
BRICK CHIMNEYS
CEDAR SHINGLES
TWO PAIRS OF GREEN-PAINTED SHUTTERS (CONJECTURAL) AT EACH DOUBLE-HUNG WINDOW
SOUTH ELEVATION
1/8" = 1'-0"
4 0 4 8 12 16 FEET
RESTORED CONDITIONS CIRCA 1880
PHILIP GALLIEN 1981
GERALD A. DOYLE & ASSOCIATES
Historical Architects
PHOENIX, ARIZONA
OFFICE OF THE DEPOT QUARTERMASTER
QUARTERMASTER DEPOT
BUILDING NO. 1
YUMA, ARIZONA
HISTORIC AMERICAN BUILDINGS SURVEY
SHEET 4 OF 4 SHEETS

5 DEVELOPMENT AND INTERPRETATION

PRESERVATION OBJECTIVES

The Office of the Depot Quartermaster, a National Register property, is subject to the Secretary of the Interior's Standards for Historic Preservation Projects. With this consideration in mind, the authors have designed a restoration program for the building which conforms to the Standards for Historic Preservation Projects and demonstrates the Park Board's committment to historic preservation.

The period of principal significance of the Yuma Crossing begins with the era of exploration and ends with the close of the military era. Thus the period of restoration for the Office of the Depot Quartermaster should also end with the military era. Although use of the building continued well into the twentieth century, the early story of the "Yuma Crossing" ended with the departure of the Army in 1884. The building underwent documented rehabilitations in 1889 and 1904, and the modifications accomplished at those times were apparent when Caperton began his work in 1972; some are still apparent today.

The authors, concurring with the Parks Board's determination that the period of principal significance of the building's history ended with the close of the military era, concentrated their efforts in determining the physical conditions of the building from the date of its construction (1872) until the Army transferred the Depot to the Department of the Interior (1883) and designed a program for development and interpretation corresponding to this period.

Although this report addresses mainly the Office of the Depot Quartermaster, the Office must be considered in context with the total Depot, Fort Yuma and the Yuma Crossing. The authors have made preliminary studies of other Depot and the Fort Yuma buildings and are of the opinion that the historic resources at the Yuma Crossing have a higher potential for restoration and interpretation as a single unit than as separate entities. Although it is unlikely that ownership of all resources at the Crossing will ever revert to a single existing agency, it would appear possible, and desirable, that a cooperative effort by several agencies could accomplish an integrated program for the restoration and interpretation of the Yuma Crossing historic resources. The principal participants of such action would be the Arizona State Parks Board and the Quechan Tribe.

The military buildings in California are virtually all owned by the Tribe, while those in Arizona have several owners, including the State of Arizona (acting through the State Parks Board), the City of Yuma and the Yuma Water Users' Association. State Parks also owns the nearby Yuma Territorial Prison State Historic Park and has achieved a noteworthy capability in the management of historic properties throughout the State. It appears to the authors that the Depot's historic resources should be managed as a single unit and, if the other owners are amenable to relinquishing their interests in the Depot, that the Parks Board should acquire and manage the entire property. In the event that additional acquisitions in the Depot are not possible, at least in the immediate future, it is suggested that the Parks Board initiate a collaborative effort between the several owners to manage and interpret the Depot buildings as a single unit. Until such time as this may occur, the Parks Board's efforts to preserve and interpret the Office of the Depot Quartermaster and the Water Reservoir should be continued.

Preservation action was begun on the Office of the Depot Quartermaster in 1972 and was continued in 1974. Most of the work accomplished to date has been directed toward protecting the structure until a total restoration effort could occur. The weather and structural integrity of the building was improved and the post-1883 intrusions were removed. Unfortunately, several actions, as later discussed, were taken which now appear to be undesirable, even though when taken, were taken for good cause, i.e., budgetary limitations and a premature desire to open the facility to the public.

The following objectives should guide future restoration actions:

1. The restoration should conform to the Secretary of the Interior's Standards for Historic Preservation Projects.
2. The restoration should be designed to achieve a high level of historic authenticity so that it may be used as an example for other preservation undertakings in the State.
3. Previously accomplished work which is not supportive of an authentic period restoration should be replaced with work which replicates the construction of the established restoration era.
4. The architectural restoration should replicate the conditions which existed in 1875, the year the building was first used by both the Quartermaster Corps and the Signal Corps. No documented changes were made to the building from 1875 to 1883. Changes made after 1883, and later uses of the building, should be presented in the interpretive program.

5. A unified program for restoration and interpretation should ultimately be established for all Yuma Crossing resources. Efforts to achieve this goal should now be initiated.

6. The design of the interpretive program, the production of graphic displays, and the acquisition of period artifacts and furnishings should commence immediately so that preservation measures may be designed to accommodate the interpretive program.

RECOMMENDED PRESERVATION PROGRAM

The Office of the Depot Quartermaster, since its acquisition by the Arizona State Parks Board, has undergone several preliminary preservation actions and is in reasonably sound structural condition. This section contains recommendations to complete the restoration process and make the building ready for public visitation. The restoration will require a significant fiscal commitment and, in the opinion of the authors, should not be undertaken in a piecemeal manner if a cost-effective program is sought. However, because funding will probably occur over a period of several years, a phased restoration has been designed.

PHASE I - PROTECTIVE MEASURES

The first phase work should continue the previously begun protective actions with the installation of an electric service, a telephone service, an intrusion alarm system, a fire detection system and a fire suppression system. With these systems in operation the building will be protected against vandalism and fire, two of the most frequent and destructive occurrences to which vacant buildings are subjected.

The electric and telephone service, which are required to operate the instrusion alarm and fire detection systems, must be installed in a visually unobtrusive manner. They must be underground from the point of service delivery, and the electric transformer, service entrance section, and control panels must be concealed from view. The utility services should be designed to accommodate future acquisitions in the Depot area by the Parks Board so as to preclude additional intrusions and the cost of multiple electric services.

The limited site now controlled by State Parks makes the location of a visually unobtrusive electric service difficult. Also, the simple, three-room Office should not be encumbered with electric distribution and system control panels. Other locations for the service entrance equipment and panels should be sought elsewhere on the Depot site and/or in buildings with rooms which will not be used for museum displays. If the Custom House Museum is to be acquired by State Parks, the placement of system control devices in this multi-room building should be considered so as to minimize intrusions in the simple Office. The installation of the protective systems, which will require cutting of finish surfaces to accommodate the work, should be completed before the restoration of finish surfaces is undertaken in the subsequent phases.

The intrusion alarm system should be designed to detect motion within the building and, perhaps, on the verandas. The same system could also detect entry through the doors and windows at little additional cost, but this optional feature is not considered necessary. A fire detection system which will respond to both temperature rise and products of combustion is recommended. With both temperature and combustion monitored, a fail-safe fire detection system is virtually assured. Both the intrusion and fire detection systems should be designed to sound local warnings and transmit a coded signal by telephone to the police and fire departments.

The fire detection system, in addition to sounding an alarm, should also activate a fire suppression system. A water system would probably be less expensive than a Halon (gas) system if a suitable water service is now present, but a water system could be as destructive to the adobe building as a fire. Water damage can be minimized by utilizing a system with automatic shut-off when the fire is extinguished. A Halon system would not cause damage to the structure or its contents, but such a system is ineffective in unsealed spaces, i.e., a wood shingle attic and rooms with open doors and windows, and for fires with a persistent source. The advantages and disadvantages of both systems should be carefully studied before a selection is made.

Phase I work, with estimated current (1982) costs, is summarized below:

Intrusion alarm system	$ 2,000
Fire detection system	2,500
Fire suppression system (water-type), including porch, excluding water main	8,000
Underground telephone service	400
Underground electric service, including entrance section	2,400
Contingencies	2,000
	$17,300

Phase I work, because of its protective nature, has the highest priority of any future preservation/restoration actions. The Secretary of the Interior's Standard for Historic Preservations Projects defines "protection" as the "....process of applying measures designed to affect the physical condition of the property by defending or guarding it from deterioration, loss or attack.....," and "restoration" as the ".... process of accurately recovering the form and details of a property and its setting as it appeared at a particular period of time by means of the removal of later work or by the replacement of missing earlier work".

The authors recommend that the restoration work on the Office be accomplished in a single stage, but perceiving the probability of incremental funding, have designed a two stage restoration program, which will accurately recover the form and details of the property as it appeared in 1872 - 1883. The determination of these conditions has been presented in Chapter 4. The first group of restoration measures includes conventional construction processes, i.e., finished grading around the building, removal of later (non-original) work, adobe repairs, reconstruction of the chimneys, and work normally performed by framing capenters. The second group of restoration measures includes the finishing processes required to complete the treatment of the building, i.e., plastering, finish carpentry, window and door repairs, painting and specialty work.

PHASE II - INITIAL RESTORATION MEASURES

The second phase measures will continue the actions commenced in 1972 and 1974, and reverse some of the actions taken at those times which are now deemed to have been improper. This work, with estimated current (1982) costs, is summarized as follows:

Site Work	
Finish grading	$ 1,000
Demolition	
Interior concrete floor	8,500
Exterior plaster removal	1,500
Concrete curb at veranda	700
Miscellaneous	1,500
Masonry	
Reconstruction of chimneys	4,000
Adobe repairs	2,800
Carpentry	
Reconstruction of wood floor (interior)	4,800
Reconstruction of wood veranda floor	9,000
Repair of outer roof framing	600
Repair of inner roof framing and installation of roof insulation	1,400
Painting	
Prime painting of new wood	400
	$37,000

PHASE III - FINAL RESTORATION MEASURES

The third phase measures will complete the restoration action required to make the building ready for the installation of the interpretive displays. Most of these actions are finish treatments and require uncommon skills for their accomplishment. This work, with estimated current (1982) costs, is summarized below:

Carpentry	
Installation of baseboards and miscellaneous trim items	1,200
Window repairs, including replacement of bowed sills and glazing	3,800
Door repairs, including replacement of missing doors and glazing	600
Plastering	
Ceiling repairs	2,500
Interior plastering	3,300
Painting	
Exterior wood	2,400
Interior wood	1,600
Interior plaster	2,800

Electrical	
Display lighting	$ 2,000
Mechanical	
No mechanical work is contemplated.	
The building will not be heated nor cooled.	
Specialty Work	
Earth inner roof exhibit	400
Window shutters	1,600
Historic hardware	1,400
Miscellaneous	2,000
	25,000

RECAPITULATION OF PHASED COSTS

Phase I - Protective Measures	17,300
Phase II - Initial Restoration Measures	37,000
Phase III - Final Restoration Measures	25,000
	$79,300

OTHER REQUIRED ACTIONS

The previously discussed three phases of work address specifically only the preservation and restoration of the Office of the Depot Quartermaster. However, before the facility can be opened to the public other actions are required and could follow, or be accomplished simultaneously with, any of the three phases. These measures, with possible (not estimated) costs, are identified below:

Intepretive displays, including artifact and furniture acquisition	$20,000 ±
Public restrooms, in a free-standing building	30,000 ±
Twenty-car parking area	7,000 ±
Pedestrian paths and signage	2,500 ±
Log stockade and fences	4,000 ±
Landscaping and irrigation system	3,000 ±
Stabilization of Water Reservoir	2,500 ±
Preservation of Water Reservoir	4,000 ±
Restoration of Water Reservoir	15,000 ±
	$88,000 ±

Presently the State Parks property lacks suitable locations for public parking, public restrooms, an administrative office, and storage; and access to the property is controlled by the Water Users' Assocation. Also, the presently-owned property has no suitable position in which to install, in an unintrusive manner, the electric service entrance section, transformer and other electrical equipment. The best solution to these problems involves the control of adjacent property, either through acquisition or a joint-use agreement. Inclusion of the Custom House Museum within the park offers immediate relief from the present site's deficiences. The multi-room Officer's Quarters and adjacent Kitchen have ample spaces to accommodate a park administration office, staff bathroom, maintenance and storage room, electrical equipment and control panels, and museum displays. Also, a new detached public restroom facility could be built, as a replication of an historic outbuilding that once stood south of the Kitchen, on the Custom House Museum property. The existing Custom House Museum's paved parking area accommodates about twenty cars and is well situated to serve the Office of the Depot Quartermaster and Corral House. Although the entrance to this parking area crosses the Water Users' Association's property, the access is not restricted.

INTEPRETATION

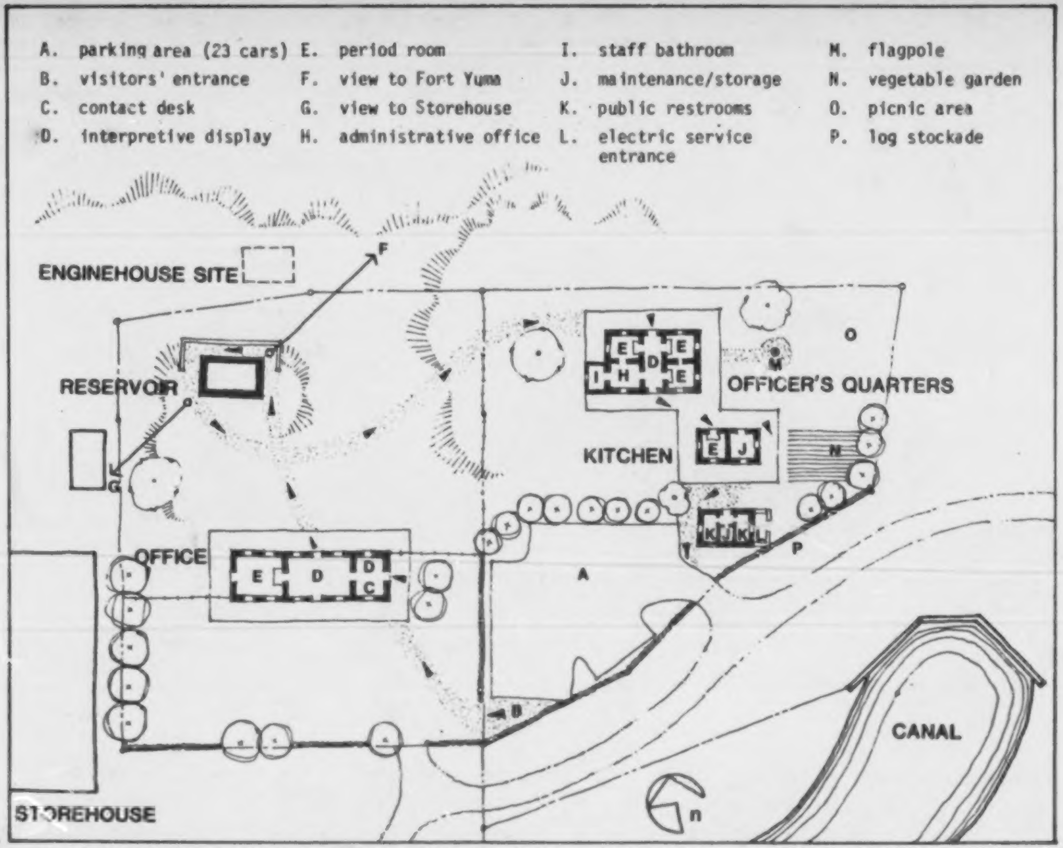
In developing the Depot's interpretation program, the site should be planned in such a way as to emphasize the riverfront (north) sides of the buildings as the "front" facades, and to screen from view the nearby intrusive elements. A cottonwood log stockade would be an historically appropriate visual and physical barrier around the developed area(s) of the Depot site.

If the Office, Reservoir, and Officer's Quarters were developed as a single administrative unit, the existing Custom House Museum parking area, properly screened from the building, could serve the three. (It could also, at least initially, serve the Corral House and Storehouse.) Visitors would be directed from the parking area to an entrance gate leading to a pathway to the east door of the Office. This building would function as the contact station and "Yuma Crossing" interpretive center, with one room furnished as the Quartermaster's office and another as the Signal Corps office. From the Office, visitors would walk to the Reservoir for a view of the Storehouse, Engine House site, and Fort Yuma, and proceed from the Reservoir on a path to the front (north) door of the Officer's Quarters. The entrance hall would contain interpretive displays, and three rooms would be furnished with period artifacts. The fourth room, with the adjoining bathroom, would be utilized as the administrative office for the park. The two rooms of the Officer's Kitchen would be used for a period kitchen exhibit and a storage/maintenance/electrical equipment room.

A new restroom building, sited and constructed to replicate an historic outbuilding, could also contain space for other supportive functions.

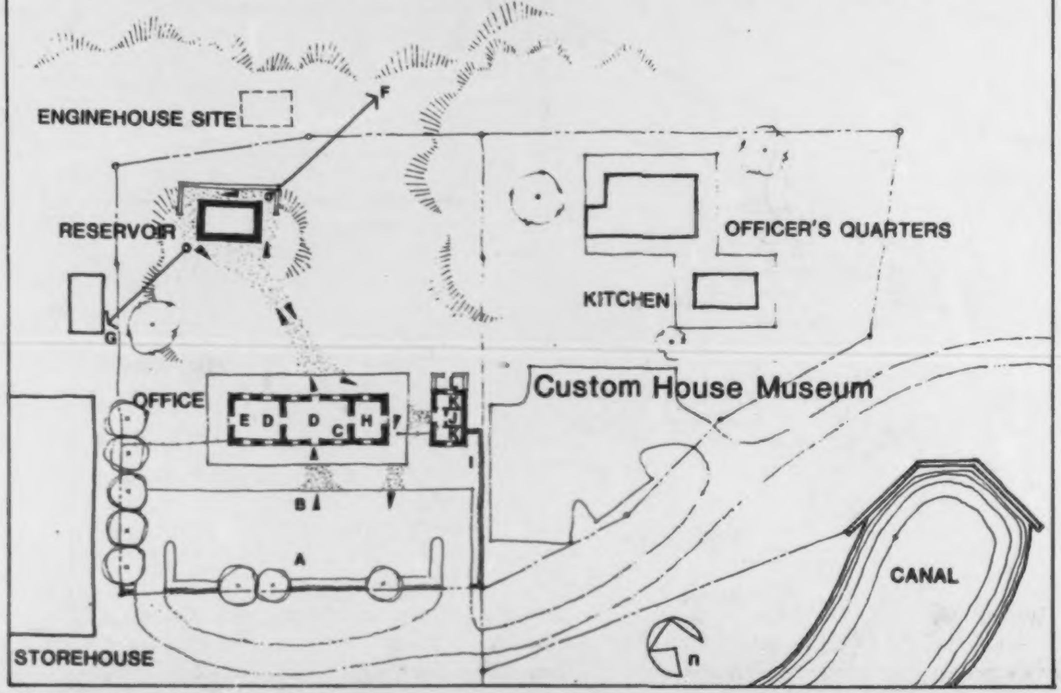
East of the Officer's Quarters and Kitchen, the historic flagpole, lawn, and garden would be replicated. This area would be an ideal location for picnic facilities that would not be visually intrusive on the historic open space between the Office and Quarters. A path would connect the Kitchen to the exit gate and parking area.

If acquisition of the Custom House Museum property is not possible in the immediate future, an alternate plan for the existing park property, which meets the functional requirements for a complete historic park, must be developed. Such a limited plan should


A. parking area (23 cars)
B. visitors' entrance
C. contact desk
D. interpretive display
E. period room
F. view to Fort Yuma
G. view to Storehouse
H. administrative office
I. staff bathroom
J. maintenance/storage
K. public restrooms
L. electric service entrance
M. flagpole
N. vegetable garden
O. picnic area
P. log stockade
ENGINEHOUSE SITE
F
RESERVOIR
G
OFFICER'S QUARTERS
E
D
E
H
E
I
M
O
KITCHEN
E
J
N
K
K
L
P
OFFICE
E
D
D
C
A
B
CANAL
STOREHOUSE
n

PROPOSED DEVELOPMENT OF THE COMBINED PROPERTIES (Office of the Depot Quartermaster and Officer's Quarters) as the Yuma Quartermaster Depot State Historic Park.

A. parking area (15 cars)
B. visitors' entrance
C. contact desk
D. interpretive display
E. period room
F. view to Fort Yuma
G. view to Storehouse
H. administrative office
I. log stockade
J. maintenance/storage
K. public restrooms
L. electric service entrance


F
ENGINEHOUSE SITE
RESERVOIR
G
OFFICER'S QUARTERS
KITCHEN
OFFICE
E D D C H
K J K
I
Custom House Museum
B
A
CANAL
STOREHOUSE
n

PROPOSED DEVELOPMENT OF THE EXISTING PROPERTY (Office of the Depot Quartermaster and Reservoir) as the Yuma Quartermaster Depot State Historic Park.

be conceived to accommodate future acquisitions. If only the Office is (initially) developed the three rooms could be used for Quartermaster/Signal Corps exhibits (Room 1), Yuma Crossing interpretive displays (Room 2), and administration/contact station functions (Room 3). A detached restroom/electrical equipment/storage building would also be needed. There is no documentary evidence that such an outbuilding ever existed on the Office site. Space for a 15-car parking area is available along the south property line, but it would encroach to within 20 feet of the Office veranda. Access to this, or any, parking area on the existing park site is possible only by crossing the Water Users' Association's property.

Regardless of which scenario of development is pursued, it is essential that protective and restorative work proceed immediately on the Office of the Depot Quartermaster and Water Reservoir so as to halt their further deterioration. Ideally, the Office restoration, restoom and parking area construction, and assembly of interpretive exhibits should be undertaken simultaneously so as to complete the facility for public visitation at an early date.

The following Yuma Crossing themes are suggested for interpretation at the park:

Pre-Spanish Indian culture
Spanish exploration and settlement
Anglo exploration and trapping
The expansion of the national boundaries and Manifest Destiny
Military and Indian affairs
The Texas Revolution and Mexican War
The Gadsden Purchase
Life on an 1870's military post
Adobe construction
Military architecture and construction

The State of Deseret and the Mormon migration
Overland migrations to the trans-Mississippi West
Stagecoach travel
Transportation and communication
The Weather Service
The Boundary Commission
Other historic resources in the area

The historic documents pertaining to the Office of the Depot Quartermaster make reference to various artifacts. A search for the identified items should be commenced so that they may be acquired for use in the interpretive exhibits. Although it is unlikely that any original items will be located, many similar (period) artifacts are readily available. Some of the artifacts documented to have been in the building during 1872 to 1883 era are:

Smith's Manual (subject undetermined)
Patrick and Carters Catalogue of
  Telegraph Supplies
Anemometer (with self-regulating attachment)
Hygrometer
Maximum thermometer
Minimum thermometer
Metal wash basin and pitcher
Kerosene lamps and can
Alarm clock
Olla
Wood chairs

Cord wood
Broom, scrub brushes, soap
Desks, cupboards and bookcases
Colored eye glass for weather observer
Water barrels and buckets
Military telegraph instrument
Signal flags
Iron stoves
Office tables
Towel rack

CONCLUSION

Although this report is primarily concerned with the Office of the Depot Quartermaster, other related historic resources merit mention. The Water Reservoir, a structure older than the Office, is in need of immediate protective and preservative treatments. Also, before any major action is undertaken on the Reservoir, or any other Depot structure which may be acquired by the State of Arizona, a comprehensive study of the Depot should be undertaken. Such a study should be sufficiently funded to provide for archaeological test excavations planned to locate documented buildings and site features which no longer exist above the ground surface, and full-scale excavation of certain documented features, such as privies, which have a high potential for artifact retrieval.

Although funding for a public restroom building has been requested in the State Parks' Fiscal Year 1982 budget and a location for such a facility within the present park boundary has been suggested in this report, the construction of a restroom building at the indicated location (or at any location within the present boundary) is not recommended if State Parks anticipates the acquisition of additional areas of the Depot. The authors believe that the construction of a restroom structure should not be undertaken until a plan for the total Depot, or the portions of the Depot which State Parks anticipates it will acquire, is developed. Similarly the construction of utilities, fences, a parking area, stockades and other site features should be coordinated with the total, or partial, Depot plan.

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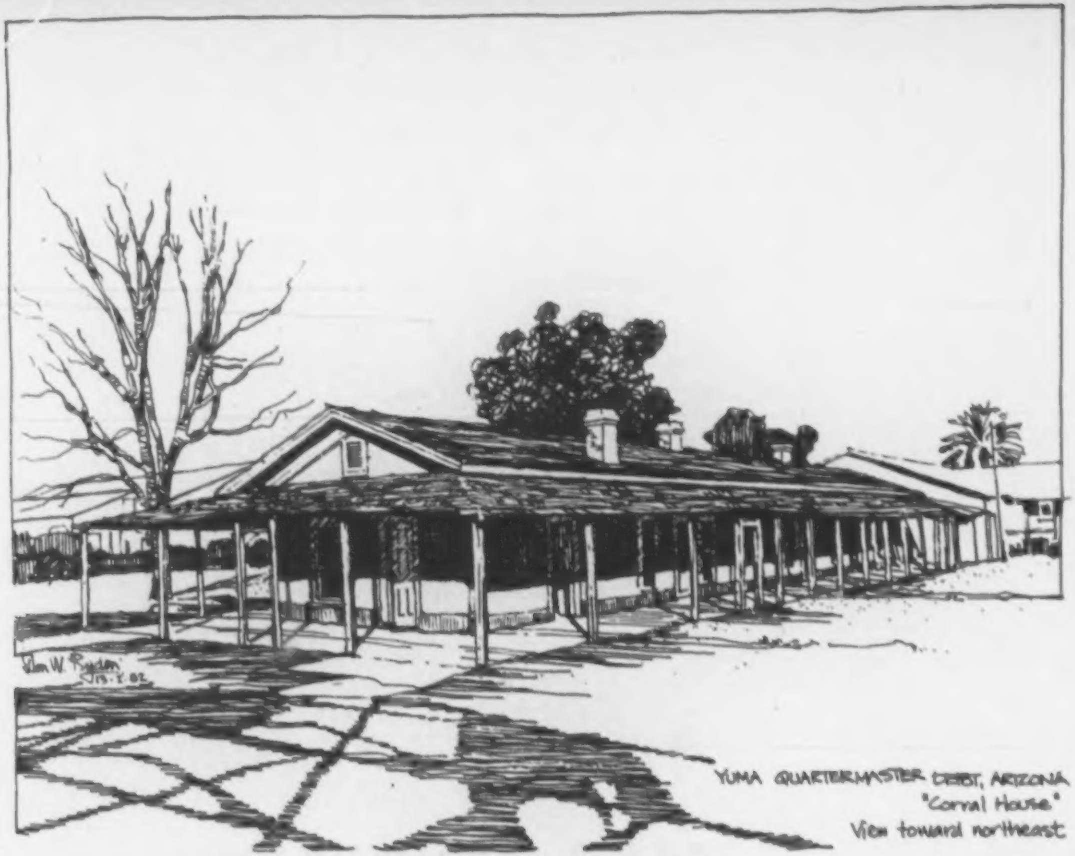

John W. Ryden
13.X.82

YUMA QUARTERMASTER DEPOT, ARIZONA
"Corral House"
View toward northeast

REFERENCES CITED

This is a list of historical documents referenced in Chapter 2, Construction History. Transcriptions of these documents are found in Caperton's Stabilization Proposal: Office of the Depot Quartermaster, Volume II.

7 Aug 1871
Yuma Depot A.T.
To: Lt. Col. C.H. Tompkins, Chf. QM. Dept. of Arizona Drum Barracks, Cala.
From: J.G.C. Lee, Depot QM

27 Nov 1871
To: Chief Quartermaster, Headquarters,
Mil. Div. of the Pacific, San Francisco, Cal.
From: QM General, Bvt. Maj. General USA

3 Oct 1871
Special Requisition:
Approved by George Crook, Lieut. Co.. 234d Infantry
Bvt. Major Genl Coms'y Dept.
Headquarters Department of Arizona, Prescott A.T.

7 Sep 1876
To: Chief Signal Officer of the Army, Washington, D.C.
through Lieut Philip Reade, A.S.O. and Supt.
From: Edward N. Boutelle, Sgt. Signal Service U.S.A. in charge of Station,
Yuma. A.T.

24 Jul 1879	To: Chief Quartermaster, Dept. of Arizona Thro' Hd. Qrs. Dept. of Arizona Whipple Barracks, A.T. From: E.J. Strang, Asst Qr Mr U.S.A.
4 Nov 1879	Unidentified memorandum
18 Jul 1881	To: Chief Signal Officer of the Army, Washington D.C. From: C.A. Smith, Yuma, Ariz. Terr.
28 Apr 1883	To: Executive Officer, Signal Service U.S.A. Washington D.C. From: W.L. Delano
10 Jul 1883	To: Executive Officer, Signal Service U.S.A Washington, D.C. From: Signal Office, Yuma. A.T.
24 Jun 1884	To: Executive Officer, Signal Service .A. Washington, D.C. From: W. L. Delano, Yuma, A.T.
13 Jul 1884	To: Executive Officer, Signal Service, U.S.A. Washington, D.C. From: W.L. Delano, Yuma, A.T.

1 Aug 1884 To: unknown From: unknown, Yuma, A.T.

25 Sep 1884 To: Chief Signal Officer of the Army, Washington, D.C.
From: Signal Office, Yuma, A.T.

11 Jul 1885 To: Chief Signal Officer of the Army, Washington, D.C.
From: J. T. Barker, Private S.S.U.S.A., Signal Office, Yuma, A.T.

6 Jul 1886 To: Chief Signal Officer of the Army, Washington, D.C.
From: Unknown, Yuma, Arizona (Semi-annual report)

21 Aug 1886 To: Chief Signal Officer of the Army, Washington, D.C.
From: Unknown, Yuma, Arizona

22 Aug 1889 To: Lt. W. A. Glassford, Prescott, Arizona
From: A.F. Whitfield, Yuma, Arizona

12 Sep 1889 To: Unknown
From: A. F. Whitfield, Yuma, Arizona

14 Oct 1889 To: Unknown
From: A.F. Whitfield, Yuma, Arizona

15 Nov 1889	To: Unknown From: A. F. Whitfield
12 Mar 1891	To: Chief Signal Officer, Washington D.C. From: Nelson Gowan, Srgt Signal Corps, Yuma, Arizona.
13 May 1891	From the expense book of Observation Office at Yuma, A.T., F. D. Lockwood.
17 Jan 1892	To: Chief of Weather Bureau, U.S. Department of Agriculture, Washington, D.C. From: Geo. H. Penrod, Observer, Yuma. A.T.
16 Mar 1904	To: Chief of Weather Bureau, Washington, D.C. From: S. Hackett, Messenger, Weather Bureau, Yuma, Arizona.
8 Apr 1904	To: Unknown From: S. Hackett, Yuma, Arizona
18 Jun 1904	To: Chief of Weather Bureau, Washington, D.C. From: S. Hackett, Messenger, Weather Bureau, Yuma, Arizona.
21 Jul 1904	To: Chief of Weather Bureau, Washington, D.C. From: S. Hackett, Yuma, Arizona

1 Aug 1904 To: Chief of Weather Bureau, Washington D.C.
From: S. Hackett, Yuma, Arizona

8 Jun 1905 To: Chief of Weather Bureau, Washington, D.C.
From: S. Hackett, Yuma, Arizona.

20 Oct 1906 To: Chief of Weather Bureau, Washington, D.C.
From: S. Hackett, Yuma, Arizona

15 Mar 1906 To: Chief of Weather Bureau, Washington D.C.
From: S. Hackett, Yuma, Arizona.

16 Jan 1908 To: Chief of Weather Bureau, Washington, D.C.
From: S. Hackett, Yuma, Arizona

Yuma Depot A.T. Aug 7th 1871

Lt Col. C. H. Tompkins
Chf. Qr. Mr. Dept. of Arizona
Drum Barracks, Cal.

Colonel.

I enclose herewith a ground plan of the office and storehouses at this depot, marked "A", and beg to submit the following facts in relation thereto, which in my opinion should be remedied with the least practicable delay.

As will be observed, the office is in the North-western corner of the building, with its north side facing the landing on the river, where all stores by water are received and shipped; its west side is the middle storehouse; its south side, the eastern storehouse; and the east faces the yard of the depot.

On the north, the noise of arrivals and departures of boats and of shipping and receiving stores, with the bustle and confusion incident thereto, comes directly to the occupants of the office through the windows which of necessity are open most of the year, being the only sources of ventilation save the windows on the East.

On the west the noise of the storehouse, piling and unpiling boxes hammering, nailing, opening and closing boxes, of the car, heavily laden being rolled in and out, and the heavy tramp of the laborers going to and fro, is continuous.

All this is repeated on the south side, in the commissary warehouses, with coopering of barrels and only a thin lath partition between

Below is the cellar and the same noise mes up through the floor.

Overhead is no ceiling, and only a thin shingle roof through which the heat of the sun easily reaches the room and greatly increases its temperature, and there are no joists to which a ceiling can be put.

Added to all this, the breezes on which alone we rely for comfort in this climate are from the south and south-west which sides are wholly shut by the warehouses.

All in all, a more unsuitable and uncomortable office for a climate like this, where the heat is terrible, could scarcely be devised. The average temperature since I have been here is from 104 to 114, with little or none of the ys outside, and as a place of business it can well be compared to an oven or steam-bath.

Other buildings, constructed with some consideration of comfort, arranged so as to admit free currents of air are comparatively comfortable.

It seems to me, that at a depot like this suitable offices for the prompt and effective transaction of business are essential.

I am therefore induced to urgently and earnestly recommend, and request authorit[illegible] to make the following additions, altera[illegible]s and repairs to the office of this depot, viz, to extend the office eastward by an addition 80ft by 26ft, as shown in accompanying plans marked "A" & "B." with high ceilings (14ft) & double roofs one of shingles and one of dirt with draft between, and plenty of openings and protected by a verandah all round. This will afford fine ventilation, and by being far cooler and more quiet will afford as much comfort in doing business as is obtainable in this climate.

The cost of this will not be great, as is shown by accompanying estimate marked "C", and will, I think, rather fall within my [illegible] than exceed it, while it will give office room for both Quartermaster and Commissary, and besides it will give the large room at present used as an office, for storage purposes, where it rightfully belongs, and for which it is very greatly needed, many of the stores now being piled out of doors exposed not only to the weather, but theft &c.

Such an office is, in my opinion, an imperative necessity at this place and I earnestly urge its construction.

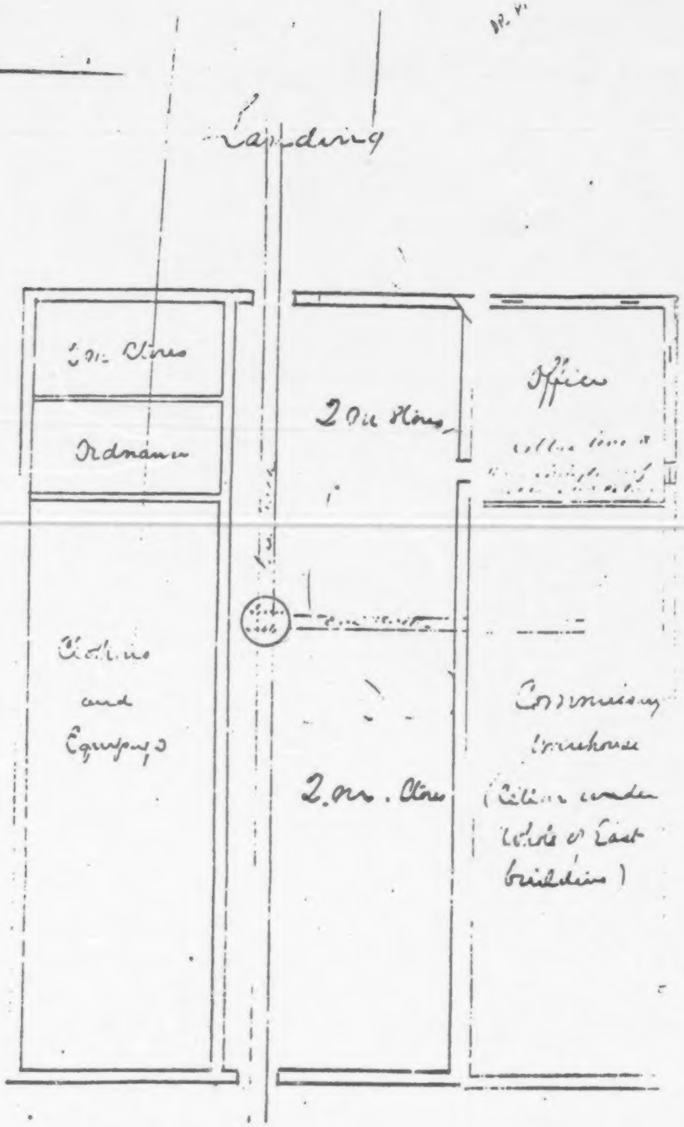
Triplicate requisitions for the material from San Francisco are enclosed.

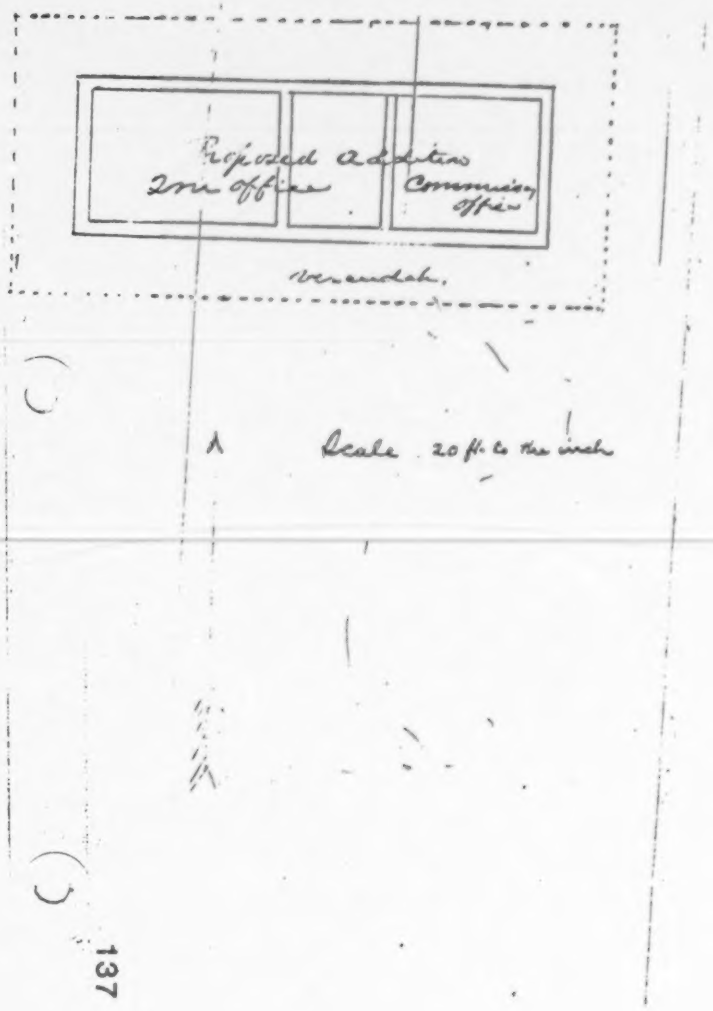
Trusting that this application will meet with approval.

I am

Very respectfully
Yr. Obt. Svt.
J. G. C. Lee
A. Q. M. U.S.A.
Depot Q.M.

Six enclosures.


Landing
Q.M. Stores
Ordnance
Clothing and Equipage
Q.M. Stores
Office
Q.M. Stores
Commissary Warehouse (Cellar under whole of East building)


Proposed addition
2nd Office
Commissary Office
Verandah.
Scale 20 ft. to the inch

Depot Office Building Authorized

1871

November 27th [illegible]

Bvt. [illegible],
[illegible],
Chief Qr. Master, Mil. Div. of the Pacific,
San Francisco, Cal.

Colonel:

Authority having been granted by the War Department, you will cause a Quartermaster or Commissary Office building to be constructed at Yuma Depot, A.T., at a cost not to exceed $3,000 Three thousand dollars.

Tracing of Ground Plan; Estimate of cost, & building materials, are enclosed.

I am, Very Respectfully,
Your Obedt. Servt.,

Quartermaster General,
Bvt. Maj. General U.S.A.

5179 of 1871,
3 Encl.

BIBLIOGRAPHY

Boyle, Bernard Michael, editor, *Materials in the Architecture of Arizona., 1870-1920*, Architecture Foundation of the College of Architecture, Arizona State University, Tempe, Arizona, 1976.

Berrus, Ernest J., S. J., *Kino and the Cartography of Northwestern New Spain*, Arizona Pioneers' Hisorical Society, Tucson, Arizona, 1965.

Caperton, Thomas J., *Stabilization Proposal: Office of the Depot Quartermaster, Yuma, Arizona*, Volume I (Existing conditions) and Volume II (Historical References), 1972.

--------, Thomas J., *Quartermaster's Depot: Restoration Accomplished as of January 1, 1973*, 1973.

--------, Thomas J., *Quartermaster Depot: Items copied from Arizona Sentinel*, 13 April 1872 through 27 July 1895.

--------, Thomas J., Untitled collection of historic document transcriptions.

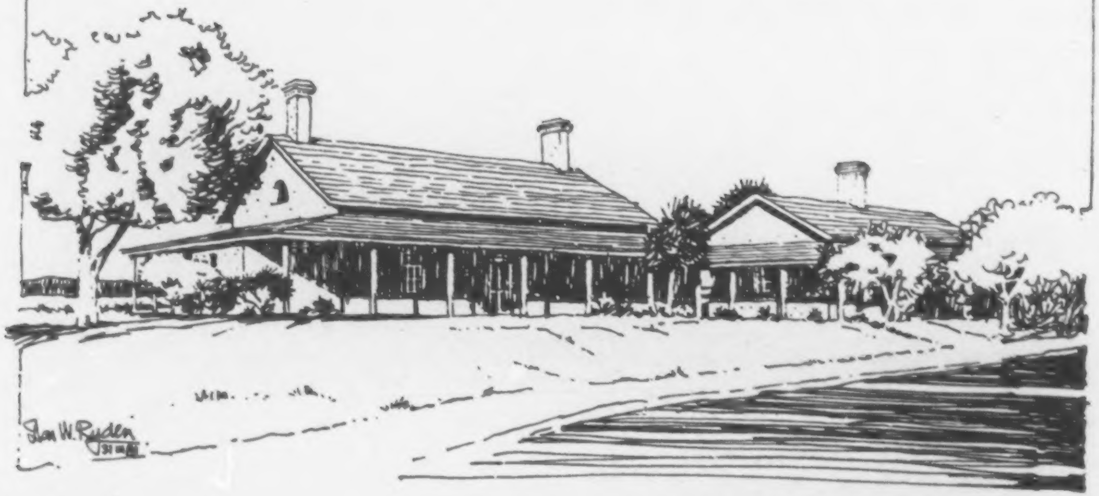
Dobyns, Henry F., editor, *The Journal of Cave Johnson Couts*, Arizona Pioneers' Historical Society, Tucson, Arizona, 1961

Walker, Henry P. and Don Bufkin, *Historical Atlas of Arizona*, University of Oklahoma Press, Norman, Oklahoma, 1979.

Wallace, Andrew, *The Image of Arizona*, The University of New Mexico Press, Albuquerque, New Mexico, 1971.

appendix A

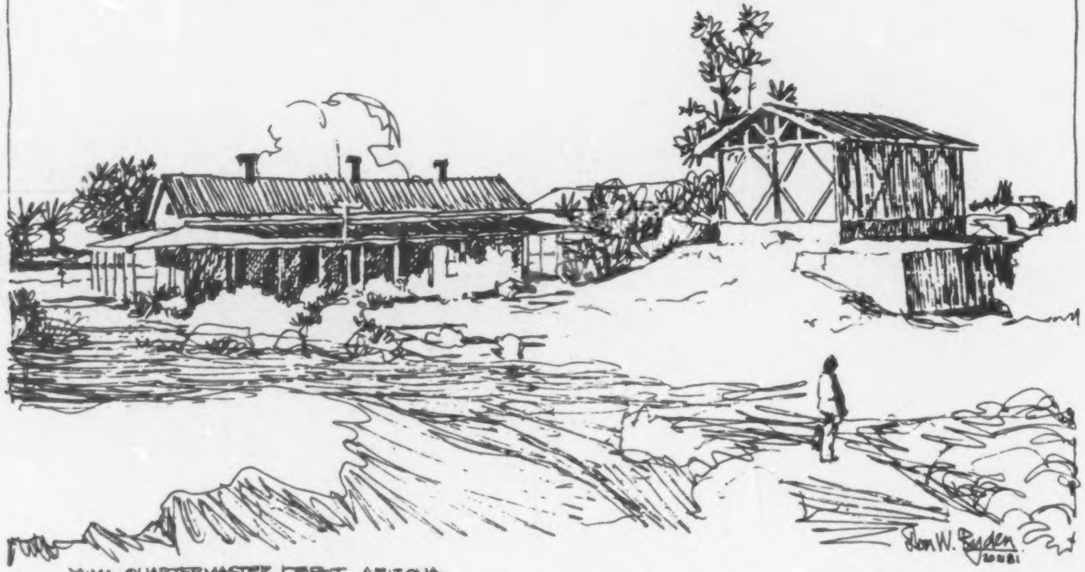
HISTORIC DOCUMENTS



YUMA QUARTERMASTER DEPOT, ARIZONA
Officer's Quarters and Kitchen
View toward northeast.

appendix B

ARCHAEOLOGICAL INVESTIGATIONS


Don W. Ryden
20 II 81

YUMA QUARTERMASTER DEPOT, ARIZONA
Office of the Depot Quartermaster and Reservoir
View toward southeast.

ARCHAEOLOGICAL TEST EXCAVATIONS AT THE QUARTERMASTER BUILDING YUMA DEPOT, YUMA TERRITORIAL PRISON STATE PARK, YUMA, ARIZONA

Prepared for:
GERALD A. DOYLE AND ASSOCIATES
Phoenix, Arizona

Prepared by:
LYLE M. STONE
Archaeological Research Services
Tempe, Arizona

November 1980

ARCHAEOLOGICAL TEST EXCAVATIONS AT THE QUARTERMASTER BUILDING YUMA DEPOT, YUMA TERRITORIAL PRISON STATE PARK, YUMA, ARIZONA

Introduction

On October 2, 1980, Lyle M. Stone of Archaeological Research Services performed limited test excavations at the existing quartermaster building of the 1864-1885 Yuma Depot, now a part of Yuma Territorial Prison State Park, Yuma, Arizona. This project was authorized by Gerald A. Doyle and Associates, A.I.A., and was performed under the conditions of an Arizona antiquities permit (No. 80-13) issued by the Arizona State Museum to Archaeological Research Services on August 13, 1980. Doyle and Associates is developing restoration plans for the quartermaster building for the Arizona State Parks Board.

The purpose of this archaeological project was to attempt to determine if subsurface evidence of the building's original porch floor construction was present. It had been noted that a brick porch floor previously existed around this building until recently at which time it was removed, exposing redeposited sand and gravel.

Study Procedures

Four small test units were excavated by hand along the south side of the quartermaster building and within an area covered by a porch (Figure 1).[1] These test units are described as follows:

Test Unit 1. This 3.3 ft. north-south by 2.8 ft. east-west unit is located immediately adjacent to the south exterior wall face of the building at a distance of from 14-to-16.8 ft. east of the southwest corner of the building. Test unit 1 was excavated to a dept of 3.0 ft. below ground surface. Figures 2 and 3 illustrate north-

[1] All figures presented in this report were drafted by Gerald A. Doyle and Associates.

south and east-west cross-sections of this test unit.

Test Unit 2. This 2.5 ft. east-west by 1.5 ft. north-south unit is located immediately south of test unit land adjacent to the inside edge of a concrete curb which defines the porch perimeter. This test unit was excavated to a depth of 1.0 ft. below ground surface.

Test Unit 3. This 2 ft. east-west by 1 ft. north-south unit is located adjacent to the south exterior wall face of the building at a distance of from 2-to-4 ft. east of the southwest corner of the building, and was excavated to a depth of 1.0 ft. below ground surface.

Test Unit 4. This small test pit, ca. 1.0 ft. in diameter, was located adjacent to the southeast corner of the building and extended to a depth of .6 ft. below ground surface.

All test units were recorded, photographed, and backfilled. Test unit 1 was drawn in north-south and east-west cross-section by Don Ryden of Gerald A. Doyle and Associates, noting soil strata and sub-surface features which had been exposed archaeologically.

Study Results

As noted in each of the test units, the existing porch floor surface consists of a loosely compacted deposit of sand and small gravel. Red brick fragments with adhering lime plaster were infrequently noted in this deposit to a depth of approximately .8 ft. below ground surface. In test unit 1, this sand and gravel deposit extended to a depth of between 2.0 and 2.3 ft. below ground surface, at which level a mud mortar layer was excavated. This mud mortar layer faced the vertical adobe wall of the building which was exposed by the excavation of test unit 1. An undisturbed sandy soil deposit was observed immediately below the mud mortar layer.

The exposed adobe wall was in excellent condition and was constructed of large adobe blocks (24 in. by 12 in. by 4 in.) set with a mud mortar. This wall extended to a depth of 3.0 ft. below ground surface in test unit 1. At a depth of between 1.0 and 1.7 ft., an approximately .8 ft. diameter patch of 1/8 in. thick lime plaster was noted adhering to the adobe wall face (Figure 3). The adobe wall extended to a depth of .7 ft. below the noted undisturbed sandy soil layer.

Test unit 2 exposed the north face of a concrete curb and pilaster or footing which supported an upright porch post of concrete and wood construction. The same loosely compacted sand and gravel deposit noted in test unit 1 was found to face the sub-surface concrete pilaster. Test unit 3 exposed a sub-surface segment of the adobe wall. Test unit 4 exposed a mud mortar deposit at a depth of .6 ft. below ground surface. This same deposit was noted at a depth of 2.0 ft. in test unit 1.

Conclusions

Based on the excavation of four small test units at this site, the following observations can be made concerning the construction of the quartermaster building at the Yuma Depot.

1. The adobe wall was constructed in a shallow (less than 1 ft.) footing trench which had been excavated into an original ground surface consisting of a sterile sandy soil.

2. The original ground surface in the vicinity of this building sloped downward from east to west at a rate of 1 ft. per 42.5 ft. of horizontal distance (2.35% slope). This slope had been raised to a level grade through the addition of a loosely compacted sand and gravel fill.

3. The noted mud mortar at the bottom of test unit 1 represents a deposit of mud construction waste which filled-in the footing trench and extended horizontally on the original undisturbed ground surface between 1.0 and 1.5 ft. out from the adobe wall face.

4. The only direct archaeological evidence noted which pertains to porch floor construction method consists of occasional brick fragments located near the surface of the redeposited, loosely compacted sand and gravel deposit.

5. The noted lime plaster patch which adheres to the adobe wall face below ground surface in test unit 1 is difficult to interpret. It is possible that this wall surface was at one time plastered and perhaps exposed to view above ground surface. This may further indicate that the loosely compacted sand and gravel fill was not deposited at the time of building construction. If this was the case, it must be assumed that a porch existed at the approximate existing ground surface elevation above the plastered wall. Alternately, the plaster patch may have been applied to the wall in order to test plaster to be used on the building. In this case the plaster patch would have been randomly applied and would have no apparent relationship to the building's porch floor.

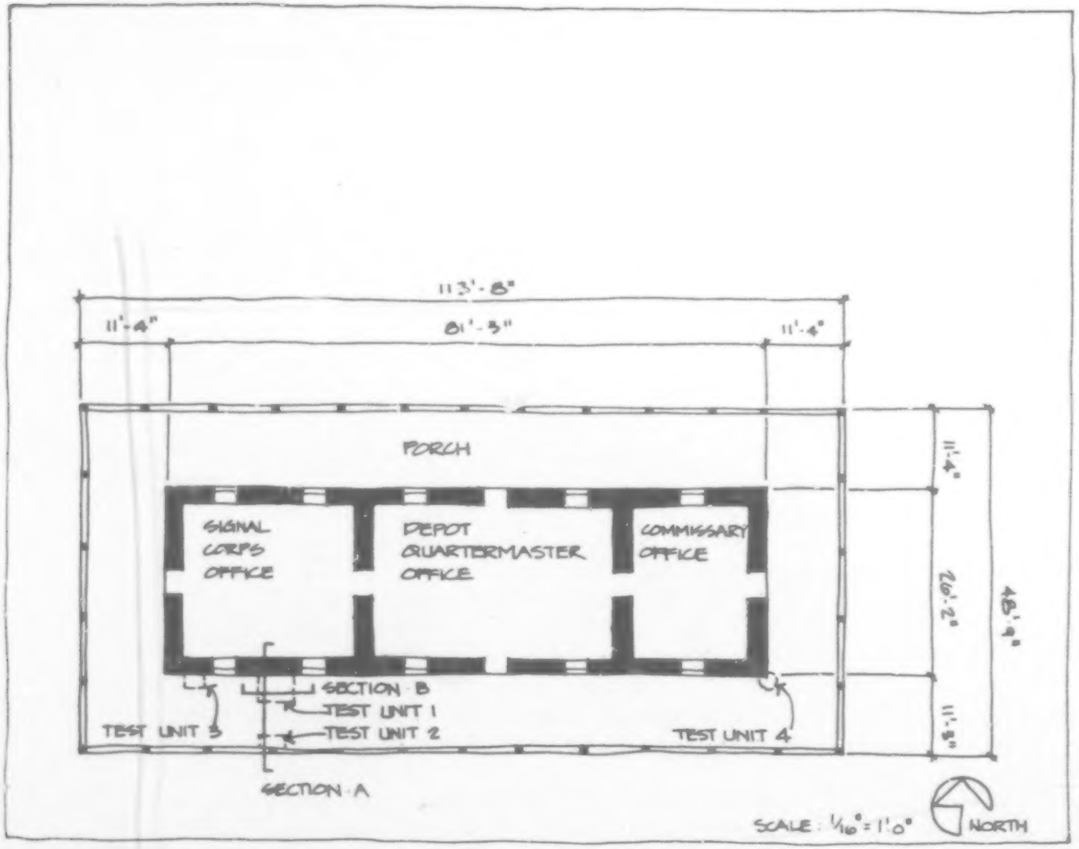

113'-8"
11'-4"
81'-3"
11'-4"
PORCH
SIGNAL CORPS OFFICE
DEPOT QUARTERMASTER OFFICE
COMMISSARY OFFICE
11'-4"
26'-2"
48'-9"
11'-8"
SECTION B
TEST UNIT 1
TEST UNIT 2
TEST UNIT 3
TEST UNIT 4
SECTION A
SCALE: 1/16" = 1'0"
NORTH

Figure 7. PLAN showing archaeological test units.

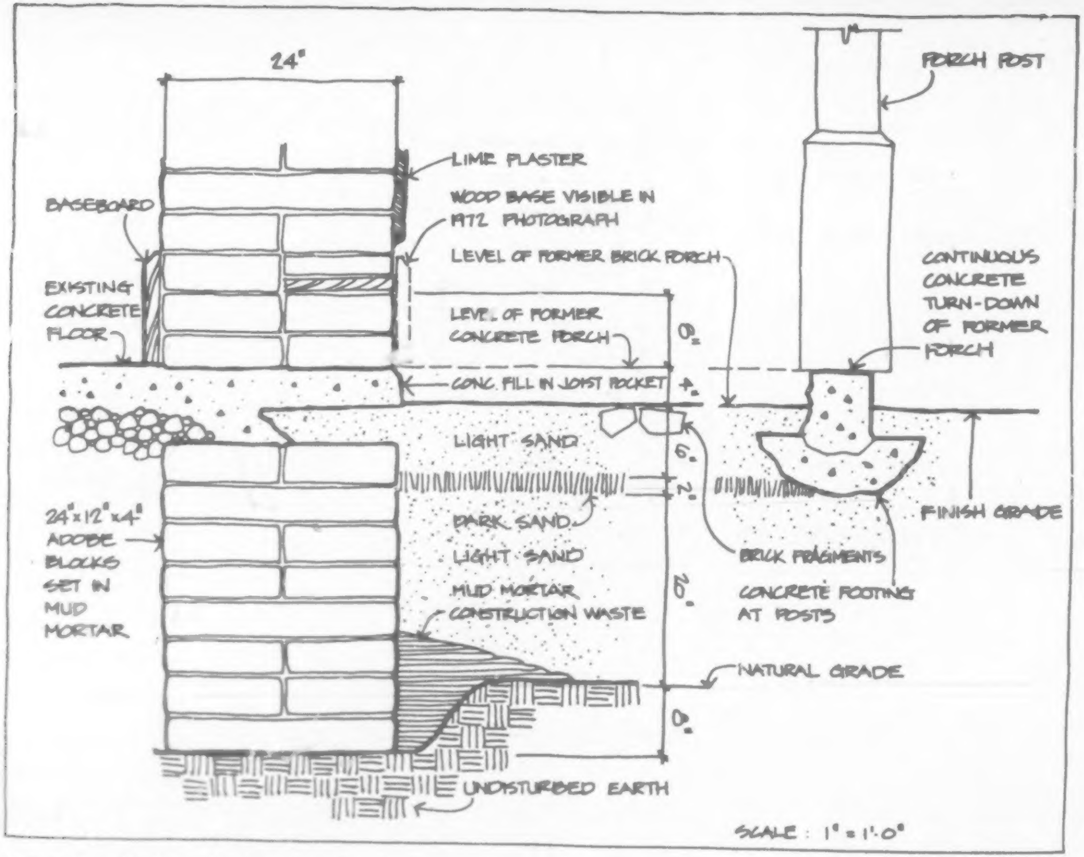

24"
LIME PLASTER
BASEBOARD
WOOD BASE VISIBLE IN 1972 PHOTOGRAPH
LEVEL OF FORMER BRICK PORCH
EXISTING CONCRETE FLOOR
LEVEL OF FORMER CONCRETE PORCH
CONC. FILL IN JOIST POCKET
PORCH POST
CONTINUOUS CONCRETE TURN-DOWN OF FORMER PORCH
8"
4"
LIGHT SAND
6"
2"
DARK SAND
LIGHT SAND
MUD MORTAR
CONSTRUCTION WASTE
20"
24"x12"x4" ADOBE BLOCKS SET IN MUD MORTAR
BRICK FRAGMENTS
CONCRETE FOOTING AT POSTS
FINISH GRADE
NATURAL GRADE
8"
UNDISTURBED EARTH
SCALE: 1" = 1'-0"

Figure 2. SECTION - A of Test Units 1 and 2.

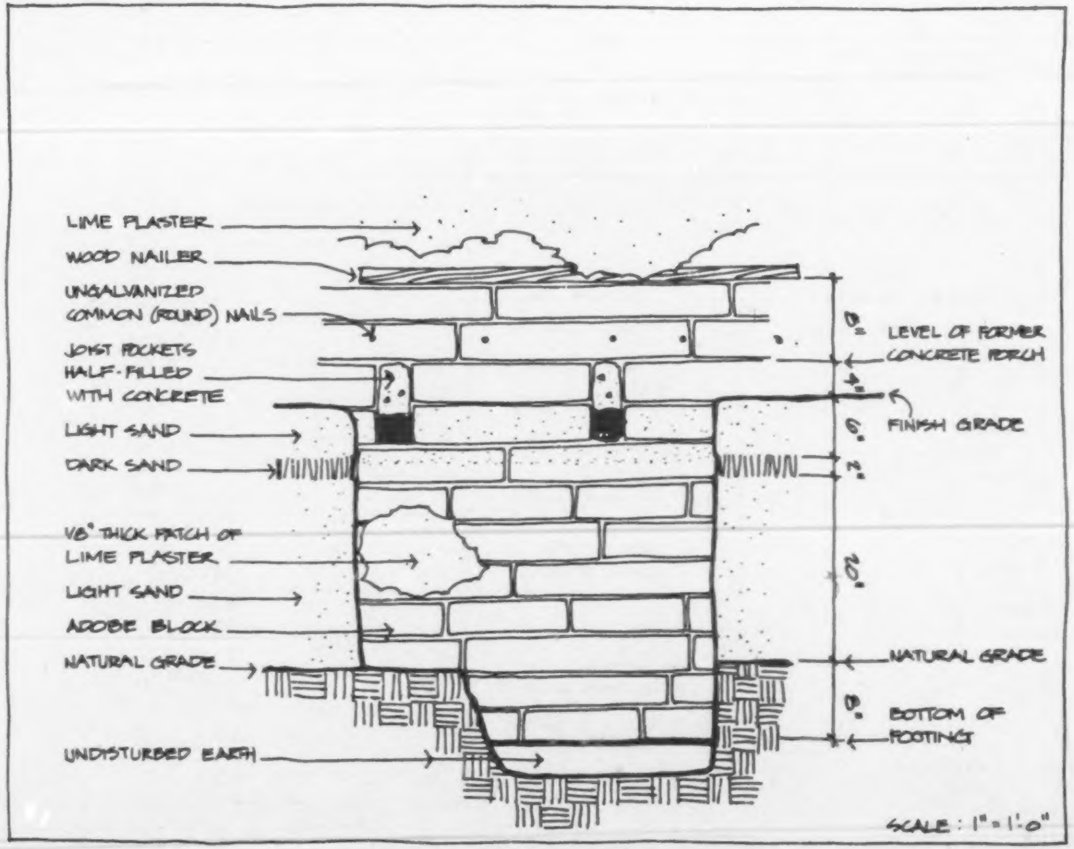

LIME PLASTER
WOOD NAILER
UNGALVANIZED COMMON (ROUND) NAILS
JOIST POCKETS HALF-FILLED WITH CONCRETE
LIGHT SAND
DARK SAND
1/8" THICK PATCH OF LIME PLASTER
LIGHT SAND
ADOBE BLOCK
NATURAL GRADE
UNDISTURBED EARTH
8"
LEVEL OF FORMER CONCRETE PORCH
4"
FINISH GRADE
6"
2"
20"
NATURAL GRADE
8"
BOTTOM OF FOOTING
SCALE : 1" = 1'-0"

Figure 3. SECTION - B of Test Unit 1.

ARCHAEOLOGICAL INVESTIGATIONS AT THE QUARTERMASTER BUILDING, YUMA DEPOT, YUMA TERRITORIAL PRISON STATE PARK, YUMA, ARIZONA

Introduction

In early October, 1980, Archaeological Research Services performed limited archaeological test excavations at the existing quartermaster building of the 1864-1885 Yuma Depot, now a part of Yuma Territorial Prison State Park, Yuma, Arizona. This project was authorized by Gerald A. Doyle and Associates, A.I.A., in order to determine if sub-surface evidence of the building's original porch floor construction was present, and was performed under the conditions of an Arizona Antiquities Permit (No. 80-13) issued by the Arizona State Museum to Archaeological Research Services on August 13, 1980.

The results of this project, as reported by Lyle M. Stone in November of 1980, were inconclusive in defining evidence of the site's original porch construction. Archaeological Research Services was subsequently authorized by Gerald A. Doyle and Associates to perform additional test excavations at the quartermaster building in a further attempt to define evidence of the building's porch which would be of value in planning the building's restoration.

This second test excavation project was performed by Lyle M. Stone and Edward M. Fortier of Archaeological Research Services on January 28, 1981. An Arizona State Museum Antiquities permit (no. 81-2) was issued to Archaeological Research Services for the conduct of this work.

Study Procedures

Four small test units (no's 1-4) were excavated during the initial project conducted in October of 1980. Five additional test units (no's 5-9) were excavated during the present project. Four of the units were located beneath the building porch and along the outside face of the building's adobe walls. A fifth unit (no. 6) was excavated beneath the porch at a distance of between 3 and 6 ft. south of the building's south wall (Figure 1). Since the earlier test units had been located along the building's south wall (see Figure 1), it was hoped that test excavations along the west, north, and south walls might provide additional information pertaining to porch construction. All test units were excavated to a depth at which either sterile, undisturbed soil was encountered, or to the surface of undisturbed cultural features such as adobe bricks or initial building construction debris.

While no artifacts were collected during this project, a number of lime mortar, plaster, and red brick fragments were encountered within the sandy soil fill which surrounds the building beneath the porch. These materials were examined and discarded in the excavation unit backfill soil.

The five new test units are defined as follows:

Test Unit 5, 3 ft. east-west by 6 ft. north-south, is located along the building's north wall, immediately east of the north doorway for the quartermaster office room.

Test Unit 6, 3 ft. north-south by 6 ft. east-west, is located between the building's south wall and the outside edge of the south porch, in the vicinity of the south doorway for the quartermaster office room.

Test Unit 7, 3.5 ft. north-south by 2.5 ft. east-west, is located along the building's east wall near its south end.

Test Unit 8, 2 ft. north-south by 2.5 ft. east-west, is located along the building's south wall, immediately east of the south doorway for the quartermaster office building.

Test Unit 9, 3.5 ft. north-south by 2.5 ft. east-west, is located along the building's west wall near its south end.

The excavation of these test units involved the removal of redeposited sand and gravel fill to a depth at which in-place adobe bricks or fragmentary adobe bricks and mud mortar debris were exposed. As noted during the initial test excavation project, this fill material consists of sand and gravel which had been used to raise the ground level around the building (beneath the porch) to an equal grade. This filling was probably necessary since the building had been constructed on an approximately 2.35% grade from east to west. Thus, the sand and gravel fill extends to a depth of from 2.2 ft. to 2.4 ft. below ground surface along the building's west end, and to a depth of .7 ft. along its east end. In test unit 9, sterile, undisturbed soil was noted below the adobe rubble at a depth of 3.2 ft. below ground surface.

All test units were recorded, photographed, and backfilled.

Observations

In reviewing and comparing archaeological data from each of the test excavation units, it is possible to make a number of observations concerning the architectural history of the quartermaster building.

1. In confirming the results of the initial test excavation project, it is apparent that the adobe building was constructed on a ground surface which sloped slightly downward from east to west. The ground surface area immediately surrounding the building (beneath the porch) was subsequently raised to a level grade with the addition of sand and gravel fill material. The depth of this fill material varies from .7 ft. below ground surface along the east wall to between 2.2 and 2.4 ft. along the west wall.

2. The exterior faces of the north and east adobe walls at original ground surface level were bordered with a horizontal course of adobe bricks oriented lengthwise. This adobe course feature may have been intended either to add stability to the building's exterior walls or to prevent water or salt erosion of the walls.

3. Building construction debris, including fragmentary adobe bricks and mud mortar, occurred around the base of the outside face of the building's adobe walls. This material was very prevalent in test units 8 and 9 along the building's south and west sides. In test unit 9 this material was approximately 1 to 1.5 ft. in depth.

4. Aside from the presence of red brick fragments throughout the sand and gravel porch fill material, no other evidence pertaining to the method of porch construction was identified.

Conclusions

Archaeologically, it has not been possible to determine the original method of porch construction for the quartermaster building. Moreover, it is doubtful that additional excavations would yield information pertaining to this question. It is recommended that Gerald A. Doyle and Associates proceed with restoration planning on the basis of historical documentary information which indicates that a brick porch surrounded this building prior to 1903.

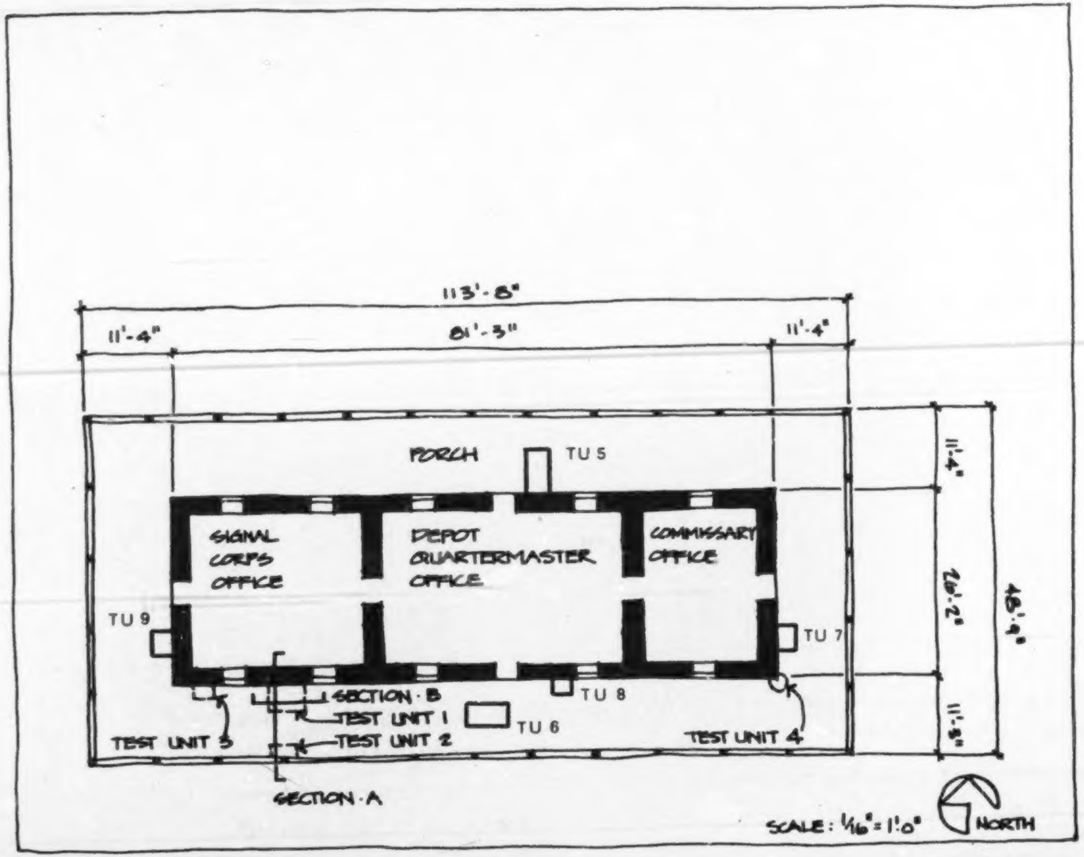

113'-8"
11'-4"
81'-3"
11'-4"
PORCH
TU 5
SIGNAL CORPS OFFICE
DEPOT QUARTERMASTER OFFICE
COMMISSARY OFFICE
TU 9
TU 7
11'-4"
26'-2"
48'-9"
11'-3"
SECTION · B
TEST UNIT 1
TU 8
TU 6
TEST UNIT 3
TEST UNIT 2
TEST UNIT 4
SECTION · A
SCALE: 1/16" = 1'-0"
NORTH

Figure 1. PLAN showing archaeological test units. (6)